DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING AND EXPEDITIONARY WARFARE CENTER
1000 23RD AVENUE
PORT HUENEME CA 93043-4301

IN REPLY REFER TO
EXWCINST 11260.1
CIOFP
2 May 14

NAVFAC EXWC INSTRUCTION 11260.1

From: Commanding Officer, Naval Facilities Engineering and Expeditionary Warfare Center

Subj: WEIGHT HANDLING EQUIPMENT PROGRAM

Ref: (a) NAVFAC P-307 Management of Weight Handling Equipment
(b) OPNAVINST 5100.23G CH-1
(c) OPNAVINST 3500.39C
(d) NAVCRANECENINST 11450.2
(e) NAVCRANECENINST 11450.1A

Encl: (1) NAVFAC EXWC Weight Handling Equipment Program

1. Purpose. To establish and maintain a safe and effective Weight Handling Equipment (WHE) Program for Naval Facilities Engineering and Expeditionary Warfare Center (NAVFAC EXWC) in accordance with references (a) through (e).

2. Cancellation. NFESCINST 5100.15 and NFELCINST 11260.1A.

3. Background. The WHE Program assigns responsibility for the maintenance, routine and annual condition inspections, load testing, and certification of all cranes and rigging gear assigned to NAVFAC EXWC used in WHE operations.

a. Reference (a) prescribes mandatory maintenance, inspection, load testing, and certification procedures required for ensuring safe and reliable WHE. Reference (a) further provides procedures and criteria for overload testing, along with standard formats for documenting these actions and certifications.

b. References (b) and (c) delineate the procedures and policies of the Navy Safety and Occupational Health Manual and Operational Risk Management (ORM) process with the purpose of establishing safety as an integral part of NAVFAC EXWC operations, training, and planning to optimize operational capability and readiness. This process is intended to be a tool used by people at all levels to anticipate hazards, minimize

risk to acceptable levels, and reduce the potential for accidents.

c. Reference (d) provides the Navy Crane Center's (NCC) WHE Design Policy and will be used as the basis for technical specifications for the procurement of new and overhauled shore based WHE and crane alterations. The process for crane alterations is provided in reference (a). Reference (e) defines Navy shore based WHE acquisition policy.

4. Applicability. This instruction is applicable to all NAVFAC EXWC departments, employees, and contractors that maintain, certify, operate, manage, purchase, or contract WHE. WHE includes all categories of cranes and rigging gear as identified in enclosure (1), Section 1.

5. Policy. WHE will be maintained and operated per references (a) through (e) and this instruction. Should discrepancies exist between reference (a) and this instruction, notify the WHE Program Manager of the discrepancy and follow reference (a) guidance until this instruction is revised.

6. Action. All NAVFAC EXWC personnel associated with the WHE Program shall follow the guidelines and policies per references (a) through (e) and this instruction.

7. Navy Crane Center (NCC). Current instructions, training, safety briefs, the crane corner, crane safety advisories, etc. are available online at the Navy Crane Center's website at http://www.navfac.navy.mil/navfac_worldwide/specialty_centers/ncc.html.

8. Records Management. Records created as a result of this instruction, regardless of media and format, shall be managed in accordance with SECNAV Manual 5210.1.

9. Forms. All the forms referenced in this instruction can be accessed and downloaded from the NAVFAC EXWC portal at https://portal.navfac.navy.mil/portal/page/portal/centers/navfacexwc/09sf/exwc%20weight%20handling%20equipment%20(whe).

M. K. EDELSON

NAVFAC EXWC WEIGHT HANDLING EQUIPMENT PROGRAM

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Section 1: TYPES OF WHE

The requirements of the WHE Program apply to all WHE and the operation of the equipment listed in reference (a). Examples include but are not limited to the following types of equipment below.

1. Cranes

a. Barge mounted cranes (category 1 through 4) at shore activities

b. Category 1 cranes such as:

(1) Portal cranes

(2) Hammerhead cranes

(3) Locomotive cranes

(4) Derricks

(5) Floating cranes

(6) Tower cranes

(7) Container cranes

(8) Mobile cranes (except those indicated as category 4) including truck, cruiser, crawler, warehouse I industrial cranes, and cranes used for dragline, pile driving, clamshell, magnet, and bucket work

(9) Aircraft crash cranes

(10) Mobile boat hoists including self-propelled and towed types

(11) Rubber-tired gantry cranes

c. Category 2 and 3 cranes (Cranes with certified capacities of 20,000 pounds or greater are category 2, cranes with certified capacities less than 20,000 pounds are category 3.) Examples include but are not limited to:

(1) Overhead traveling cranes (including runway track and hanger supports for under-hung cranes)

(2) Gantry cranes (rail mounted)

(3) Wall cranes

(4) Jib cranes

(5) Davits

(6) Pillar cranes

(7) Pillar jib cranes

(8) Monorails and associated hoists (including track, switches, and hanger supports)

(9) Fixed overhead hoists, including fixed manual and powered hoists

(10) Portable A-frames and portable gantries with permanently installed hoists

(11) Pedestal mounted commercial boom assemblies (fixed length and telescoping types) attached to stake trucks, trailers, flatbeds, railcars, or stationary mounted to piers, etc., with certified capacities less than 2,000 pounds

(12) Portable A-frames and portable gantries with permanently installed hoists

d. Category 4 cranes including but not limited to:

(1) Commercial truck mounted cranes

(2) Articulating boom cranes, including ammunition handling truck/cranes with equipment category code 0704

(3) Pedestal mounted commercial boom assemblies (fixed length and telescoping types) attached to stake trucks, trailers, flatbeds, railcars, or stationary mounted to piers, etc., with certified capacities of 2,000 pounds and greater

e. Reference (a) also applies to cranes installed ashore for training on shipboard operations unless such equipment is managed under an alternate Navy standard.

2. Rigging Gear

a. Slings, shackles, eye bolts, swivel hoist rings, links, rings, turnbuckles, insulated links, etc.

b. Crane structures, container spreaders, personnel platforms, and portable manual and powered hoists

c. Manual and powered hoists that are mounted by means of an upper hook (the source of power; air, electric, or manual; is irrelevant)

d. Portable load indicators (e.g., dynamometers, load cells, crane scales, etc.)

e. Below the hook lifting devices as identified in American Society of Mechanical Engineers (ASME) B30.20

f. Portable A-frames, portable floor cranes, and portable gantries (Portable A-frames and portable gantries with permanently installed hoists are category 2 or 3 cranes.)

g. Cranes and hoists procured with, integral to, and used solely in support of larger machine systems (e.g., milling machines, press brakes, shore power booms, etc.)

Section 2: WHE PROGRAM PERSONNEL RESPONSIBILITIES

1. Commanding Officer (CO)

a. Has final authority and responsibility for all WHE operations, testing, maintenance, and certification performed by NAVFAC EXWC personnel or involving NAVFAC EXWC equipment.

b. Designate in writing the WHE Program Manager, certifying officials, licensing officials, departmental/divisional WHE representatives, and alternates.

c. Request that Naval Facilities Engineering Command South West (NAVFAC SW) assume responsibility of managing and administrating the program instruction, testing, and licensing for the NAVFAC EXWC West Coast category 2 crane operators.

d. Request that Naval Construction Training Center (NCTC) Port Hueneme assume responsibility of managing and administrating the program instruction, testing, and licensing for the Construction Equipment Division Port Hueneme (CED1) category 1 crane operators, and ensure the proper operation and maintenance of the cranes when in the custody of NCTC.

e. Request that Public Works Department Gulfport assume responsibility of managing and administrating the program instruction, testing, and licensing of the Construction Equipment Division Gulfport (CED2) Crane Operators.

f. Designate the Ocean Construction Support Facility (OCSF) Manager as the East Coast Detachment (ECD) Licensing Program Official.

g. Request that Naval Facilities Engineering Command Mid-Atlantic assume responsibility as the certifying official for category 1 mobile cranes at OCSF ECD.

f. Request that NAVFAC SW assume responsibility as the service provider and certifying official for the category 2 and 3 cranes at NAVFAC EXWC Port Hueneme.

2. WHE Program Manager

a. Designated in writing and has overall responsibility for administering the WHE Program. The WHE Program Manager reports directly to the Executive Officer (XO).

b. Provide oversight for the WHE Program and maintain administrative records such as designation letters.

c. Maintain the building 1100 crane operators license records and ensure the Enterprise Safety Application and Management System (ESAMS) correctly reflects license and physical dates.

d. Maintain building 1100 completion records for reference (a), Appendix N qualifications for all riggers and category 3 crane operators and update in ESAMS.

e. Distribute Crane Safety Advisories (CSA), Equipment Deficiency Memorandum(s) (EDM), safety briefs, messages, and other NCC topics to NAVFAC EXWC WHE personnel. Track, coordinate, and ensure completion of corrective actions (as applicable) with departmental WHE representatives, the command, and the NCC as required.

f. In the departmental WHE representative’s absence and following the procedures in sections 14 and 15, approve purchase orders for the procurement and/or testing of WHE.

g. Coordinate with department heads on issues that pertain to their respective department’s WHE Program.

h. Upon supervisor’s recommendation, add crane operators, maintenance personnel, riggers, etc., to the WHE operator e-mail group and ensure the appropriate task is assigned in ESAMS.

i. Perform reference (a), Appendix N checkouts for qualifying crane riggers, as required, in the absence of departmental WHE representatives, or when required to assist them. Assign department WHE representatives who are category 2 or 3 crane operators to perform reference (a), Appendix N checkouts with qualifying category 3 crane operators.

j. Act as the primary point of contact for NCC WHE audits. Coordinate the preparation of audit responses to NCC audit reports, and review and concur with all audit responses.

k. Issue keys for the building 1100 General Use Lab (GUL) and Deep Ocean Lab (DOL) bridge crane lockboxes to qualified operators. Collect keys from operators prior to transfer or when they are no longer qualified. Master keys will be maintained by the facility manager and the certifying official.

l. Conduct routine surveillance, in accordance with section 5, of WHE operations and provide feedback for the improvement of safe work methods and procedures.

m. Assist the Safety Manager in WHE accident investigations and reporting.

n. Approve critical non-crane rigging operations and complex lift plans in accordance with section 9 and 10.

o. Complete reference (a) training and qualification requirements for crane rigger, rigging gear inspector, and contractor crane awareness.

p. Submit the command and departmental WHE representatives to the Management Services Division (BD4) for inclusion into the collateral duties notice.

3. CED 1 and 2 Certifying Officials

a. Designated in writing by the CO. The certifying official will in turn, designate in writing the authorized test directors and condition inspectors involved in the certification process.

b. Familiarize themselves with the test director’s certification process for WHE, which includes knowing proper contents of certification packages and understanding the proper procedures to certify WHE.

c. Review and sign all certification documentation for WHE.

d. Maintain the current letters of designation for the load test director, alternate load test director, crane inspectors, crane mechanics, and license officials.

e. Chair the pre-audit self-assessment of their respective Construction Equipment Division (CED) and provide the WHE Program Manager the results for the pre-audit notification report.

f. Track, coordinate, and ensure completion of corrective actions for applicable CSA and EDMs. When requested by the WHE Program Manager, provide feedback in response to CSA and EDMs.

g. Serve as the lead for all alterations or modifications for cranes per reference (a).

h. CED 1 and 2 Certifying Officials are considered the department representative of their respective CED and shall perform the duties and responsibilities of department representative as defined within this section.

i. Provide the names of crane personnel to the WHE Program Manager for inclusion into the WHE operator e-mail group.

j. Maintain a history file of all qualified WHE operators and ensure CED crane personnel are added to ESAMS and updated, as required, to reflect qualifications.

k. CED 2 is audited separately by the NCC and therefore the CED 2 Certifying Official is the lead for the audit. The CED 2 Certifying Official routes the pre-audit information and the audit response to the WHE Program Manager who will review, comment, and route to the CO for approval and subsequent release to NCC.

l. Ensure that the CO, XO, and WHE Program Manager are aware of NCC audit team in-briefs and out-briefs. The CO and/or XO shall participate in the out-brief and may choose to do so via phone, Video Tele-Conference (VTC), or in person.

Note: The CED1 Certifying Official shall be designated as the alternate WHE Program Manager.

4. Ocean Construction Support Facility Manager

a. Responsible for all aspects of the WHE Program at the OCSF and shall keep the WHE Program Manager informed as required.

b. The OCSF is audited separately by the NCC and therefore the OCSF Manager is the lead for the NCC audit. The OCSF Manager routes pre-audit information and the audit response to the WHE Program Manager who will review, comment, and route to the CO for approval and subsequent release to NCC.

c. Ensure that the CO, XO, and WHE Program Manager are aware of NCC audit-team in-briefs and out-briefs. The CO and/or XO shall participate in the out-brief and may choose to do so via phone, VTC, or in person.

d. Serve as the licensing program official and departmental representative of the OCSF.

5. CED 1 and 2 Load Test Directors

a. Designated in writing by their respective certifying officials.

b. Schedule, direct, and conduct required load testing, certification, and applicable component certification of all respective cranes in accordance with reference (a). This includes annual inspections of all maintenance and repairs performed, as well as annual inspection and testing. Prior to certification, ensure repaired/replaced parts do not constitute a crane alteration per reference (a).

c. Provide the respective certifying official accurate and complete certification packages for signature, and familiarize the certifying official of the contents of the certification package. Packages will be annotated with any minor deficiencies that are to be deferred. Under no circumstance will a certification package be created or presented to the certifying official that has any deficiency that would deem it non-certifiable per reference (a).

d. Ensure all affected parties are notified of crane certification expiration dates and coordinate the annual maintenance and certification schedule.

e. Maintain Equipment History Files (EHF) for CED cranes in accordance with reference (a). Compile complete and accurate documentation (e.g., condition inspections, load tests, certification packages, Non-destructive Tests (NDT) for hooks, applicable components certifications, hook tram, engineering alterations and authorizations, certification extensions, repair documentation, accident reports, etc.) for inclusion in the EHF.

f. Administer the Lockout/Tagout Program as required for the cranes per section 12.

g. Review the Operator’s Daily Checklists (ODCL) and applicable Operator’s Monthly Checklists (OMCL), and notify the appropriate authorities of any corrective action. File the original ODCL/OMCL in the respective EHF.

h. Participate in the WHE self-assessment team.

i. Assist in the investigation of WHE accidents when requested.

j. Ensure condition inspections are performed in accordance with reference (a).

k. Generate work orders, as required, for inspection and certification.

l. Review work orders when work is complete and ensure all maintenance criteria have been met. Pertinent documentation will be included with the completed work order and forwarded for appropriate load test, certification, and filing in the EHF.

m. Provide guidance for the inspection, maintenance, and repair of all assigned cranes per references (a) through (d).

n. Create and maintain Maintenance Inspection Specification Records (MISR) per reference (a) and Original Equipment Manufacturer (OEM) data.

o. Develop a lubrication and service program for each crane per reference (a) and OEM data.

p. Ensure maintenance personnel are qualified and technically competent to perform maintenance and inspections.

q. When requested by the certifying official, perform reference (a), Appendix N checkouts for qualifying personnel and recommend qualification to departmental supervisors.

r. Maintain respective CED training and qualification records in accordance with reference (a), Appendix N qualifications for crane personnel and ensure ESAMS reflects same.

s. Approve all new and replacement wire rope prior to ordering.

6. Departmental/Divisional WHE Representatives

a. Designated in writing by the CO. Departmental representatives report directly to the WHE Program Manager. Divisional representatives report to departmental representatives when available and in their absence the WHE manager.

b. Function as the department’s primary contact point for matters pertaining to the departmental WHE program.

c. At the minimum, departmental/division WHE representatives will be qualified crane riggers and rigging gear inspectors.

d. Per sections 14 and 15, departmental representatives shall approve WHE requisition requests for their department and divisions within the department. Departmental/divisional representatives shall perform receipt inspection, verification of certification requirements and documentation, serializing, marking, and entering into the departmental WHE record program per reference (a) and section 11.

e. Maintain a departmental/divisional rigging gear history record in accordance with reference (a) and section 11 for all departmental maintained WHE equipment.

f. Ensure their respective department/division completes the annual rigging gear periodic inspections and load tests (as required) per reference (a) and section 11.

g. Assist the WHE Program Manager, as required, for all matters pertaining to the WHE Program.

h. Take prompt action in responding to the WHE Program Manager for action items such as, but not limited to, Crane Safety Advisories (CSA) and Equipment Deficiency Memorandums (EDM).

i. Perform reference (a), Appendix N checkouts for qualifying personnel and recommend qualification to departmental/divisional supervisors.

Note: Only qualified category 2 or 3 crane operators designated as departmental/divisional WHE representatives will perform Appendix N checkouts for qualifying category 3 crane operators. CED load test directors may also conduct Appendix N checkouts.

j. Departmental/divisional representatives from the Ocean Facilities Department (CIOFP) and the Expeditionary Engineering Director Division (EX5) will ensure completion of the OMCLs for the DOL, GUL bridge, and building 1393 cranes within the first five working days of each month; route to their supervisor for signature; and forwarded to the certifying official’s representative and WHE Program Manager. CIOFP is responsible for bridge crane numbers 44, 61, 62, and building 1393 crane numbers 4 and RG019. EX5 is responsible for crane numbers 58 and 59.

k. Departmental/divisional representatives from CED 1 and 2 shall ensure OMCLs for CED 1 and 2 cranes are completed within the first five working days of each month, route them to their supervisor for signature, and forward to the certifying official’s representative and respective CED Load Test Director.

l. Departmental/divisional representatives from the Mobile Utilities Support Equipment (MUSE) Division shall ensure completion of the OMCL for the building 1360 crane within the first five working days of each month, route it to their supervisor for signature, and forward to the certifying official’s representative and WHE Program Manager.

7. Facility Managers

Facility Managers shall provide funding to the service provider and certifying official to service, maintain, and test building 1100, building 1393, building 1360 (MUSE), and CED 1 and 2 installed cranes.

8. Safety Manager

a. Assist departments in the investigation and reporting of any accidents or near misses.

b. Participate as a Crane Surveillance Team member (in accordance with section 5) and provide feedback for the improvement of safe work methods and procedures.

c. Approve complex lift plans per section 10.

9. Department Heads/Division Directors

a. Ensure all WHE operations are completed per reference (a) and this instruction.

b. Nominate departmental/divisional WHE representatives and ensure they are designated in writing by the CO.

c. Ensure funding is made available for the departmental/divisional representatives to carry out their responsibilities per this instruction.

d. Conduct periodic inspections of the departmental work spaces and ensure uncertified WHE is not available for use or is properly identified as tie down or horizontal movement equipment in accordance with section 11.

e. Support the WHE Program Manager in regards to departmental/divisional WHE issues.

f. Provide written approval to NAVFAC EXWC personnel for signaling contractor cranes when circumstances require it.

g. Investigate accidents in accordance with section 6.

10. Supervisors

a. Ensure personnel are qualified to perform crane or rigging work prior to assigning tasks.

b. Inform the WHE Program Manager or for CEDs, the certifying official, of those personnel that are to be assigned crane team responsibilities.

(1) The WHE Program Manager or for CEDs, the certifying official, shall assign the training requirements within ESAMS and maintain a history file of qualified WHE operators.

(2) The WHE Program Manager or for CEDs, the certifying official, will update ESAMS upon completion of training and inform the supervisor when the associated training, qualification, and/or licensing requirements are complete.

c. Ensure WHE that is not properly certified is not available for use.

d. Familiarize themselves with NAVFAC EXWC's WHE Program. Supervisors are strongly encouraged to view the training media available at the NCC website and/or complete the relevant NCC Navy Knowledge Online (NKO) courses.

11. Contracting Officer Representative (COR)

a. Complete the NCC training course, "Contractor Crane Awareness" (NCC-CCA-02), available at NKO.

b. Familiarize themselves with and adhere to section 16 of this instruction.

c. Ensure contractor personnel authorized to operate, maintain, inspect, or test Navy WHE are qualified per reference (a). Department of Defense (DoD) contractors will provide to the Contracting Officer (KO) documentation that the aforementioned training, qualification, and licensing requirements are met. CORs or their designated representatives shall verify that the contractor provided documentation of the aforementioned requirement prior to the contractor operating Navy WHE.

d. Ensure that all contract requirements related to WHE work are enforced, including work performed by sub-contractors. Provide adequate oversight during contractor WHE operations including contractor accident prevention, accident investigations, and corrective actions.

Note: Contractor crane oversight shall be requested using the NAVFAC BMS F-19.7, NAVFAC EXWC-FEC Support Agreement process or local Naval Base Ventura County (NBVC) approved process. See section 16 for details.

12. Government Purchase Card Approving Officials

The Approving Official (AO) accepts or rejects a requisition order based on DoD/Department of the Navy government purchase and WHE policy (see reference (a) and figure 14-1 for examples).

a. If the AO accepts the order, the AO shall add the transaction to the bank system Program Audit Tool, for AO and APC review.

b. The AO shall ensure the WHE technical screening block is checked and that the departmental WHE representative or WHE Program Manager has digitally signed the Weight Handling Manager/Representative block indicating satisfactory screening for reference (a) compliance.

Note: Divisional WHE representatives do not have the authority to sign the Weight Handling Manager/Representative block.

13. Government Purchase Card Activity Program Coordinator (GPCAPC)

Scans for WHE purchases during monthly audits and identifies erroneously coded purchases and notifies the WHE Program Manager.

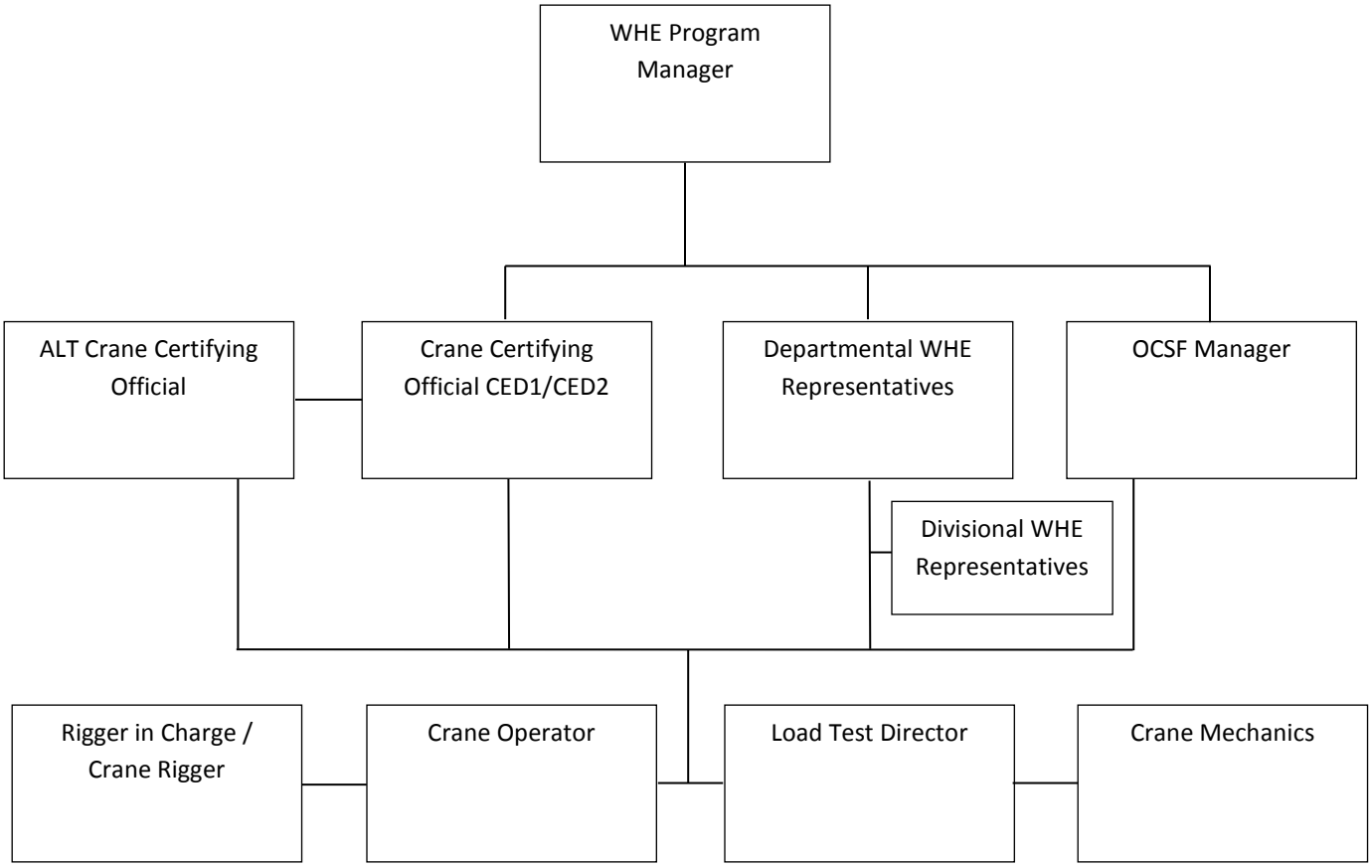
14. Crane Team Members

a. Qualify and operate WHE per reference (a) and this instruction.

b. Shall not signal contractor cranes, except when given written approval from their respective department head to do so.

Section 3: WHE PROGRAM ORGANIZATIONAL CHART AND WHE PROGRAM RESPONSIBILITY CHART

1. WHE Program Organization Chart



Note: For the incumbents of the billets above please contact the WHE Program Manager.

2. WHE Program Responsibility Chart

The chart below lists the different NAVFAC EXWC locations involved with the WHE Program and delineates responsibilities for maintenance, certification, and licensing.

LOCATION	**RESPONSIBLE PARTY**		
	MAINTENANCE	**CERTIFICATION**	**LICENSING** *See Note 1*
OCSF	Contractor Support	NAVFAC MIDLANT	OCSF Manager
CED Gulfport	CED Gulfport	CED Gulfport	Public Works Gulfport
CED Port Hueneme CAT 1	- CED Port Hueneme (preventative maintenance as per 3M, and any corrective maintenance) - NCTC Port Hueneme (basic operator maintenance and R-checks)	CED Port Hueneme	NCTC Port Hueneme
CED/MUSE Port Hueneme CAT 3	Public Works NBVC	Public Works NBVC	*See Note 1*
Building 1100 CAT 2 & 3	Public Works NBVC	Public Works NBVC	NAVFAC SW for CAT 2 *See Note 1 for CAT 3*
Note 1: CAT 3 Operators at all locations shall be trained and qualified in accordance with Section 1 of this Instruction			
Note 2: Rigging gear utilized by any code/department will be maintained / certified in accordance with Section 2 and 11 of this instruction.			

Section 4: CRANE AND RIGGING OPERATIONS/SAFETY

1. Purpose

To provide specific direction on the safe use and operation of Navy owned or operated cranes and rigging gear. In all cases reference (a), section 10 “Operational Safety” shall be followed. All personnel involved with crane and/or rigging operations are responsible for the safe operation of WHE while performing their duties as defined in reference (a) and this instruction. Compliance of the specified rules and procedures, coupled with good judgment, will aid in the prevention of WHE accidents or near misses.

2. Background

a. It is the responsibility of the crane team to ensure all crane operations are conducted with the safety of personnel and equipment as their highest priority. ORM, per reference (b), is applicable to all crane operations and should be utilized in the planning and preparation of crane/lifting work.

b. Crane/Rigging team personnel shall report all accidents, near-misses, and other unplanned occurrences in accordance with section 6. By reporting such to the command, and the command to the NCC, the lessons learned will be shared Navy wide so that another employee does not repeat the process and possibly injure themselves or cause damage to government property.

c. All personnel not engaged in rigging/unrigging the load or engaged in attaching/removing the load to/from a structure or another component shall be kept clear of the fall zone (i.e., the area in which it is reasonably foreseeable that partially or completely suspended material could fall in the event of an accident).

3. Minimum Requirements

A crane operator and a rigger in charge will be the minimum crane team members for all category 1, 2, and 4 and category 3 cab-operated cranes.

a. The rigger in charge will determine if additional personnel such as crane riggers and/or crane walkers are needed, and shall assign them accordingly.

b. For category 2 and category 3 non-cab operated crane operations, the minimum crane team will consist of the crane operator if the size and complexity of the work is limited, and the operation can be safely conducted by one person.

Note: The category 2 and category 3 non-cab operated crane safety courses contain sufficient rigging information to allow operators to perform most of their own rigging for simple, routine type lifts (e.g., moving a pump or part from a pallet to a bench or machine, removal or loading of a part from/to trailers, etc.) The more complicated a lift becomes, ORM mandates additional considerations such as: engineered lift rigs/procedures, a second operator to assist, riggers, signalmen, on-site manager, etc. Category 2 and 3 non-cab operated crane operators shall request, from their supervisors, additional support for all but simple routine lifts such as: lifts when securing the load is questionable; lifts when the load should be prevented from swinging or rotating, such as operating in windy conditions or handling odd shaped objects; or when the load and/or work area cannot be seen by the crane operator.

4. Crane Team Members

The crane team consists of the crane operator, rigger-in-charge, crane riggers, and crane walkers, as required. The rigger supervisor shall designate the rigger-in-charge (team leader), crane riggers, and crane walkers. The size of the team will vary to suit the job as determined by the rigger supervisor. The concept of effective teamwork will be stressed by management. Team members will work together to ensure the safety of crane operations. While each member of the team has defined responsibilities, everyone is responsible for recognizing potential problems and making all team members aware of them. Any crane team member shall stop the job any time unsafe conditions are found and report problems that cannot be resolved by the team to a supervisor. All crane team members are responsible to perform and support safe crane/lifting work in accordance with reference (a).

a. Crane Operator. The primary responsibility of the operator is the safe operation of the crane. Operator responsibilities include: performing a pre-use check of the crane at the start of the shift; fully understanding the lift prior to starting, including participating in pre-lift briefings; maintaining communication with the rigger-in-charge or designated rigger throughout the operation; making movements only when given the direction to do so by the signalman (when such direction is required, e.g., for cab-operated cranes); and refusing to operate the crane when there are concerns about the safety of the operation.

b. Rigger-in-Charge. The rigger-in-charge has overall control of the operation including: planning all aspects of the lift, determining the weight of the load to be lifted, establishing the appropriate method of communication with the operator, ensuring the load is properly rigged, ensuring the crane operating envelope remains clear of all obstructions, providing signals to the operator or assigning another rigger or signal person to provide the signals, and conducting the operation in a safe manner. The rigger-in-charge will coordinate the activities of other crane team members and perform a pre-lift brief with all members of the crane team.

c. Crane Rigger. The crane rigger is responsible for carrying out the assignments from the rigger-in-charge including: assisting the crane operator in performing his pre-use check of the crane, proper gear selection and inspection prior to use, safe rigging of the load, and keeping the rigger-in-charge informed of questionable conditions associated with the operation.

d. Crane Walker. Crane walker responsibilities include: assisting the rigger and operator in the pre-use check of the crane, ensuring the safe travel of the crane by observing for potential obstructions, properly aligning crane rail switches, and being in a position to immediately notify the operator to stop operations should a potential problem arise.

Note: Crane Team members shall not engage in any part of a WHE evolution unless physically fit, mentally alert, and emotionally stable.

First and perhaps most important, the operator shall, by self-examination, determine whether they are physically, mentally, and emotionally fit to operate the machine. The lives of many may be dependent on the operator's actions. If the operator is on medication, he/she will consult a physician regarding adverse effects. The operator will ask themselves daily: Do I feel well? Can I handle the physical tasks of operating? Do I have a clear head and am I thinking and remembering properly? Am I alert? Is my attitude good today? Am I calm, cool, and collected? If an operator cannot honestly answer yes to these questions, operating a crane could be an accident hazard and shall not operate the crane.

5. Crane Operator Guidelines

a. Crane operators shall only operate cranes with a current certification, unless the crane is undergoing maintenance or load test in support of repair or certification.

b. Crane operators shall not operate crane systems which are in lockout or tagout conditions.

c. Crane operators shall not rely on limit switches to limit or stop crane operation. Approach limit switches only at slow speed. Safety devices such as interlocks and limit switches shall not be used as operational controls.

d. Crane operators shall not attempt, be permitted, or be required to operate a crane in an unsafe manner or to operate a crane known to be in an unsafe condition. Operators have the authority and are encouraged to stop and/or refuse to handle loads if they believe it is unsafe.

e. Follow the guidance established in reference (a), section 10 to avoid WHE overload.

f. Ensure loads are secure. Any loose material must be secured prior to the lift.

6. Standing/Reaching Under Suspended Loads

Loads will not be suspended or moved over personnel. When it is absolutely necessary, personnel may reach under suspended loads for a short duration to install/remove coverings, make

attachments, position supports, etc., provided the load is not suspended over the employee's head and the only body parts under the load are the arms. Any reaching under the load will be approved by the rigger-in-charge. The load will not be in motion while the employee is reaching under the load. Crane team members will minimize the occurrence of reaching under suspended loads.

7. Crane Operation Safety

a. When operating in the vicinity of overhead electrical transmission lines and/or near communication towers, crane operators and riggers shall be alert to this special hazard and strictly follow the requirements of reference (a).

b. Cranes will not be operated or assembled/disassembled unless ground conditions are firm, drained, and graded sufficiently so that, in conjunction with the use of supporting materials (if necessary), the crane manufacturer's specifications for adequate support and degree of level of the crane are met. Crane operators shall ensure they are aware of the location of known hazards in the vicinity of the crane set-up area, such as voids, tanks, and utilities. If the operator determines that ground conditions are unsatisfactory or questionable, work will not proceed and the activity engineering organization will be notified for evaluation.

c. **NAVFAC EXWC personnel shall not signal contractor cranes except when having written approval from their respective department head to do so.**

d. Crane operators shall only make movements when given direction by the signal man.

e. Cranes used in construction will follow the requirements of ref (a), paragraph 10.2.2.3.1.

8. Special Requirements

a. When using a multi-purpose machine configured as a crane for lifting suspended loads, ensure the machine is authorized by the OEM to make suspended load lifts. Ensure the equipment is equipped with a capacity chart. Operators shall be licensed in accordance with NAVSUP P-538 or NAVFAC P-300 and will be trained

to make such lifts. Suspended load lifts with multipurpose machines will be treated as complex lifts if the loads meet the criteria of section 10. Lifts of personnel in a suspended platform with these machines is prohibited. When using material handling equipment and construction equipment to lift suspended loads, ensure the equipment OEM permits such lifts, that the equipment is properly configured to make such lifts, and that such lifts are made in accordance with OEM requirements. Lift capacity will be posted on the equipment.

b. When using attachments with material handling equipment (including forklifts), a qualified rigger must be on the ground connecting the rigging. WHE (including WHE connected to the attachment) must be inspected prior to use and be in a departmental WHE record and inspection program. The attachment itself must also be inspected prior to use.

c. Per the NCC Weight Handling Safety Brief 11-S-03 (Figure 4-1), the forklift operator shall be licensed in accordance with NAVSUP P-538 or NAVFAC P-300 (as applicable) and trained to make such lifts.

d. The attachments (booms) used with forklifts are currently not covered by reference (a), and neither NAVSUP P-538 nor NAVFAC P-300 list the test load requirements. Per the NCC, proof testing to OEM and industry standard is acceptable. Only use attachments that have been proof tested and that the forklift OEM has given permission to use (additional capacity chart). Each attachment “model” needs separate permission and capacity charts from the forklift OEM.

e. Rigging slings directly over the forks (i.e. blades) is not permitted without the forklift OEM’s written permission. This practice is very dangerous due to the sharp angles of the forks and the strong likelihood that the slings will be cut when tensioned.

f. Material Handling Equipment (MHE)/forklift operators that are required to use an attachment to configure the MHE/forklift as a crane for lifting suspended loads shall complete the MHE/WHE OJT Qualification Form (Figure 4-2) with their respective WHE Program Manager, OCSF Manager, CED 1 or 2 Certifying Official, or designated representative.

9. Figure 4-1 NCC Weight Handling Safety Brief 11-S-03

Navy Shore

Weight Handling Safety Brief

Title: Lifting Suspended Loads with "Non-Crane" Equipment

Target Audience: Operators of Non-Crane Equipment being used to Suspend Loads

- **Performing suspended load lifts with multi-purpose machines, forklifts, or construction equipment is very convenient; and can be very dangerous if not performed 'by the book!'**
- NAVFAC P-307 OF DECEMBER 2009, SECTION 10, paragraph 10.18
  - Ensure the equipment OEM permits such lifts to be made.
  - Ensure equipment is configured as required by OEM.
  - Ensure the equipment is equipped with a capacity chart.
  - Ensure operators are LICENSED in accordance with NAVSUP P-538 or NAVFAC P-300 as applicable, and are TRAINED to make such lifts.
  - Lifts of PERSONNEL in a suspended platform with these machines is PROHIBITED.
- Rigging Gear used to suspend loads must comply with NAVFAC P-307 OF DECEMBER 2009, SECTION 14.
- Remember that performing suspended load lifts is NOT the primary function of these pieces of equipment. Special caution is required!
- All shore activities and contracts were required to be in compliance by December 2010.

23 February 2011

SAFETY

Navy Crane Center 11-S-03

10. Figure 4-2 MHE/WHE Operator OJT Qualification Form

Date: _____

Mr. _____ has successfully completed his "On the Job Training" to operate Forklifts configured as a crane for lifting suspended loads. Under my direction, he has demonstrated the necessary skills to perform the duties of operator for the specific type of equipment listed above.

_____

EXWC WHE/OCSF Manager, CED 1, 2 Certifying Official as applicable or their designated representative

Date: _____

I, _____, have successfully completed the required "On the Job Training" for operator of Forklifts configured as a crane for lifting suspended loads. I thoroughly understand all applicable aspects of and feel completely comfortable in safely operating Forklifts configured as a crane for lifting suspended loads. I understand there must be a qualified crane rigger attaching the load to the forklift attachment and signaling the lift and that the lift shall be treated as a complex lift if the load meets the criteria of NAVFAC P-307 paragraph 10.4.1 and that I will ensure the original equipment manufacturer (OEM) of the forklift permits such lifts to be made and the OEM capacity chart (calculated for the attachment) shall be posted on the equipment. I understand that the attachment must have been proof tested to industry standards and inspected prior to use. I also understand that if there are any questions or concerns about the safe operation of this equipment, I am to stop operations and notify my supervisor.

_____

MHE Operator/Rigger Signature

11. Safety Devices

Supervisors shall control the use of all bypassing safety device keys. Keys will be removed from the bypass switches when not in use. The keys will be removed from the crane and retained by the supervisor. On cranes where safety devices may be bypassed by other means, permission for bypassing safety devices (except for performance of the operator's pre-operation inspection) will be obtained from the supervisor.

a. Safety device bypass requirements will be posted in the operator's cab of all cranes equipped with safety device bypass capability.

b. CED1, CED2, or OCSF may establish more restrictive measures or crane specific safety device bypass procedures as needed to ensure safe operation of cranes. Such procedures will be in writing, approved by the supervisor responsible for crane operations, and posted in the cab of those cranes to which the procedure applies.

12. Lubrication and Servicing

a. CED1, CED2, and OCSF shall develop instructions for the scheduling, performance of lubrication, and servicing for their respective cranes which they are considered the service provider.

b. Activity, Navy experience, and crane usage may be used as a basis for modifying OEM recommended programs. Modification of OEM recommended programs require activity engineering approval.

c. Where the Navy’s 3M program (OPNAVINST 4790.4) is utilized for NAVFAC EXWC cranes, the program shall incorporate all OEM requirements into the specific crane’s maintenance requirements cards.

d. Lubrication instructions shall be developed using OEM manuals and instructions as a guide when available.

e. Inspectors shall perform a detailed review of maintenance records and equipment during prescribed inspections

to ensure that lubrication and servicing are being properly performed as specified.

13. OEM Supplemental Safety Information

CED1, CED2, and OCSF shall contact the OEM or authorized distributer for supplemental information applicable to the cranes they maintain and if practicable, request they are added to the OEM's distribution list for such information.

14. Operating in Adverse Conditions

The instructions of subparagraphs a. through f. for adverse operating conditions and severe weather conditions will be posted in the operator's cab. Additionally CED1, CED2, and OCSF will develop an adverse operating condition SOP for their respective cranes and the SOP will be posted in the operators cab.

a. When an operator observes an adverse operating condition, he/she will suspend operations and notify supervision for resolution. An adverse operating condition may result from climatic conditions (e.g., snow, ice, wind, rain, lightning, etc.), inadequate support conditions (e.g., loose soil, outrigger/stabilizer bearing on manhole, etc.), congestion or obstructions, improper or inadequate rigging procedures, or any other situation that the operator feels could result in uncontrolled movement or otherwise render the operation unsafe.

b. The effects of adverse weather or high winds on cranes and loads can affect the stability of the crane. Even light winds can blow a load out of control, collapse booms, and topple machines. Specified wind speeds for reducing allowable loads and for curtailing operations will be based on control of the load and OEM recommendations for stability of the equipment during high winds. Cranes shall not be operated when wind speeds at the site attain the wind velocity restrictions of the crane manufacture or when load control is questionable. Local authority, i.e., base commander, may require a more restrictive adverse operating policy and if so, the policy shall be followed.

c. Projects shall have adequate means for monitoring local weather conditions.

d. When lightning is observed, all crane and hoisting equipment operations shall cease. Conditions will be observed for 30 minutes between subsequent observations prior to resuming work.

e. Supervisors shall monitor local weather conditions to ensure the requirements of this section are not violated.

f. When severe adverse weather conditions (e.g., snow, ice, wind, rain, lightning, etc.) have the potential to develop, actions will be taken to prevent damage to WHE. Equipment will be secured per OEM recommendations.

15. Crane Shut-down

All cranes will be properly shut-down and secured when not in operational use. All cranes will be shut-down and secured in accordance with reference (a), section 10 and OEM guidance. For cranes without specific shutdown and securing procedures and in addition to the requirements of reference (a), section 10, the following will also be accomplished at the end of each shift or whenever the crane will be un-manned for an extended period of time:

a. All lifting and handling gear shall be removed from the cranes hooks.

b. All hooks shall be raised near the upper hoist limit switch.

c. The crane shall be positioned in a safe location.

d. Power to the cranes operating controls shall be secured.

16. Personal Protective Equipment (PPE)

PPE shall be worn during all WHE operations. Typical PPE for WHE operations include:

a. Hardhat (mandatory)

b. Steel-toed work shoes (mandatory)

c. Safety glasses

d. Gloves

e. Personal flotation device (mandatory when over or near water)

f. Hearing protection

g. Safety vest

17. Personnel Judgment

Personnel should trust their judgment. If an employee feels a situation is unsafe, it most likely is. If an employee feels they are putting themself or others at risk performing any work, they shall stop operations and call their supervisor. The safety of personnel is the highest priority.

Section 5: NAVFAC EXWC SURVEILLANCE PROGRAM

1. Purpose

The objective the NAVFAC EXWC Surveillance Program is to ensure compliance with reference (a) and this instruction. Crane and rigging operations surveillance has proven to be an effective tool in accident prevention. Documenting WHE Program deficiencies (i.e., operations, maintenance, inspection, engineering, administrative) is important to ensure that low level deficiencies are identified and addressed in order to prevent more critical problems (i.e., crane and rigging accidents or maintenance and engineering errors from occurring).

2. Crane Surveillance Team (CST)

a. The WHE Program Manager, CED 1 and 2 Certifying Officials, and OCSF Manager shall assign CST members based on their experience, competency, and ability to assess potential hazards. All personnel within the crane program, as well as safety and supervisory personnel, are candidates for the CST and shall be assigned, as required, to perform WHE Program surveillance. CST members must be vigilant in their duties in order to prevent reinforcing bad practices by leaving them unnoticed and/or undocumented.

b. When conducting surveillance, CST members will monitor for compliance to references (a) through (e) and this instruction. Surveillances shall be documented using Figure 5-1 or 5-2 as a guide or locally developed (approved by WHE Program Manager) site specific surveillance forms. All deficiencies are to be documented with detailed remarks of non-compliance or unsafe conditions or actions. At a minimum, the respective supervisor shall be immediately contacted when a deficiency is discovered that may lead to injury or equipment damage.

c. CST members are authorized to stop any WHE operation if a discrepancy that could lead to personnel injury or damage to equipment is observed. The presence of CST members during surveillance does not relieve the crane and/or rigging team of their responsibility for the safe conduct of the operation.

d. Surveillance will be conducted in proportion to the amount of work performed, and/or accident/near miss rate.

Surveillance will be conducted quarterly at CED 1, OCSF, and buildings 1100 and/or 1360 (frequency may be increased as required). Surveillance will be conducted monthly at CED 2 due to the volume of WHE work. The CED 1 and 2 Certifying Officials, OCSF Manager, and WHE Program Manager shall ensure surveillance is scheduled, assigned, and completed, to include corrective actions. Surveillance by a division, shop, manager, etc., other than where assigned is encouraged.

Note: The WHE Program Manager shall coordinate surveillance for buildings 1100 and 1360.

e. Corrective actions for discrepancies will be completed within 10 days to the satisfaction of the respective CED 1 or 2 Certifying Official, OCSF Manager, and/or WHE Program Manager. On a case by case basis, extensions may be granted by the respective certifying official or manager.

f. The OCSF Manager and CED 1 and 2 Certifying Officials shall electronically submit completed surveillance forms to the WHE Program Manager. The OCSF Manager, CED 1 and 2 Certifying Officials, and WHE Program Manager shall monitor for trends and take corrective action as required.

g. Forms will be serialized coinciding with location and run sequentially throughout each new calendar year, e.g. CED1-2014-01, CED1-2014-02, OCSF-2014-01, OCSF-2014-02, etc.

h. Completed surveillance forms shall be retained for three years by the aforementioned managers and respective certifying officials.

3. WHE Lifting and Handling Surveillance Forms Guidelines

Two forms are available for surveillance documentation (Figures 5-1 and 5-2). The following information is provided to assist the CST in the accurate completion of form 5-1.

a. Report Type:

(1) Static - Observations of stationary situations, e.g., travel path obstructions, chaffing gear issues, uncertified rigging equipment, etc.

(2) Operational - Observations of actual lifting and handling operations, i.e., crane lifts, rigging operations

b. Date of surveillance:

c. Time of surveillance:

d. Surveillance location: List which shop, crane #, and what task was being performed

Note: Do not list the names of those performing the task.

e. Identify if a work stoppage resulted from the observation: (Yes/No)

f. Type of Surveillance:

(1) Crane Lift

(2) Pre-Use Inspection

(3) Rigging Gear

(4) Documentation (Administrative)

(5) History Binder (Administrative)

g. Performance Observation: (SAT/UNSAT)

(1) The surveillance originator will provide a complete, concise description of what was observed in one or more of the blocks provided.

(2) If a problem was noted, describe the problem in sufficient detail to provide the reader an understanding of the problem/deficiency.

h. Immediate actions:

(1) If a problem was noted that required immediate action (e.g., unsafe practice, failure to wear PPE, dangerous path of travel, etc.), list what actions were taken. The description will contain sufficient information to provide the

reader with an understanding of the immediate corrective action(s) taken.

(2) If the problem requires disciplinary action, follow up with the personnel’s supervisor.

i. Originator: The individual performing the surveillance

j. Surveillance Completed By: The originator's printed name, signature, and date

k. Date the surveillance was performed and submitted

l. Corrective Actions: Certifying officials or managers shall assign corrective action as needed and acknowledge completion of corrective action by signing the last block of the surveillance form.

4. Figure 5-1 NAVFAC EXWC Weight Handling Surveillance Form

NAVFAC EXWC WHE SURVEILLANCE FORM

Surveillance Serial #	Report Type: ☐ Static ☐ Operational	Is This A Work Stoppage? ☐ Yes ☐ No
SURVEILLANCE DATE: _____ TIME:		
SURVEILLANCE LOCATION (Shop, Crane#, task observed, etc):		
TYPE SURVEILLANCE: ☐ Lift ☐ Pre-Use Insp. ☐ Rigging Gear ☐ Certification Documentation ☐ History File ☐ Other _____		
PERFORMANCE OBSERVATION	Provide A Brief Description Of The Job / Lift / Problem(s)/ Performance Observation - SAT/ UNSAT ☐ ☐	
Problem A		
Problem B		
Problem C		

Representative/Code Responsible for the Problem:	Problem A	Problem B	Problem C
IMMEDIATE ACTIONS Provide A Description Of The Problem and Immediate Actions Taken:			
Immediate Actions for Problem A			
Immediate Actions for Problem B			
Immediate Actions for Problem C			
ORIGINATOR			
Surveillance Completed By:			Date:

SURVEILLANCE CONTINUATION FORM

Additional Notes:	
CORRECTIVE ACTIONS	Provide A Description Of Corrective Actions Needed:
Actions for Problem A	
Actions for Problem B	
Actions for Problem C	

Rep / Code Responsible For Taking Corrective Action:

Problem A	Problem B	Problem C	Estimated Completion date:	Actual Completion date:

Respective CED 1, 2 or OCSF/CMD WHE Manager

(sign and also print name) Date:

5. Figure 5-2 NAVFAC EXWC Weight Handling Surveillance Form

NAVFAC EXWC WEIGHT HANDLING SURVEILLANCE FORM			
Surveillance Serial #	DATE:	LOCATION:	CREW/USN
RIC:	CR:		CO:

		SAT	UNS	NA	RIC	CR	OP
PRE-USE INSPECTION OF RIGGING EQUIPMENT	1						
RIC PREPARED FOR BRIEFING	2						
SIGNAL PERSONNEL IDENTIFIED IN PRE-LIFT BRIEFING	3						
LIFT CORRECTLY IDENTIFIED AS ROUTINE OR COMPLEX	4						
WEIGHT OF ITEM INCLUDING RIGGING EQUIPMENT DISCUSSED	5						
OPERATIONAL RISK MANAGEMENT DISCUSSED	6						
ALL CRANE TEAM MEMBERS PRESENT FOR BRIEFING	7						
PRE-LIFT BRIEFING OUTLINE FOLLOWED	8						
SAFETY ASPECTS DISCUSSED (PPE & GENERAL SAFETY)	9						
OBSTRUCTIONS WITHIN THE CRANE OPERATING ENVELOPE THOUGHOUT THE ENTIRE LIFT IDENTIFIED	10						
B. JOB EXECUTION		**SAT**	**UNS**	**NA**	**RIC**	**CR**	**OP**
RIGGING EQUIPMENT WITHIN TEST DATE AND OF SUFFICIENT CAPACITY TO PERFORM THE LIFT	11						
CLEAR SWING PATH AND GENERAL CLEARANCES	12						
LOAD CONTROLLED AT ALL TIMES (TAG LINES, HANDS ON,ETC)	13						
LOADS NOT TRAVERSED OR SUSPENDED OVER PERSONNEL	14						
USED CORRECT HAND SIGNALS/ CONTINUOUS SIGNALING THROUGHOUT THE HOISTING EVOLUTION	15						
CRANE TEAM MEMBERS POSITIONED CORRECTLY	16						

PERFORMED POST USE INSPECTION OF RIGGING EQUIPMENT	17						
PERSONNEL/TRAFFIC CONTROLLED IN CRANE ENVELOPE	18						
VESTS AND ALL REQUIRED PPE WORN	19						
FALL PROTECTION	20						

C. CRANE ATTRIBUTES		**SAT**	**UNS**	**NA**	**RIC**	**CR**	**OP**
ODCL CARD COMPLETED SATISFACTORY	21						
OPERATOR HAS LICENSE IN POSSESSION	22						
RIC IDENTIFIED THE TYPE OF COMMUNICATION TO BE USED THROUGHOUT THE ENTIRE LIFT	23						
OPERATOR STOPS CRANE OPERATIONS IF COMMUNICATION IS NOT CONSTANT	24						
TRIAL LIFT PERFORMED AS REQUIRED	25						
OPERATOR DID NOT MAKE ANY MOVEMENT WITH OUT DIRECTION FROM A SIGNAL PERSON	26						
EVOLUTION STOPPED DUE TO UNSAFE CONDITION	27						
CRANE PROPERLY SET UP	28						

NUMBER 1-28	**ATTRIBUTES / DISCREPANCY REMARKS**

SIGNATURE		**DATE**	

MANDATORY MEETING WITH RESPECTIVE CED 1 or 2 CERTIFYING OFFICIAL, OCSF FACILITY MANAGER OR WHE MANAGER (AS APPLICABLE) FOR UNSATISFACTORY SURVEILLANCE. Corrective actions will be determined and responsible party for resolution assigned.

DATE		**TIME**		**Certifying Official or Manager SIGNATURE**	

Section 6: CRANE AND RIGGING GEAR ACCIDENT INVESTIGATION, REPORTING, AND CORRECTIVE ACTIONS

1. Investigation and Reporting of Crane and Rigging Gear Accidents

This section is applicable to all cranes and rigging gear that are property of the Navy and are either certified or intended to be certified for use. It also applies to contractor cranes that are operated in support of activity production efforts if they are operated by contractors or Navy licensed operators. In addition to the investigation and reporting requirements of reference (a), section 12 and reference (b), NAVFAC EXWC shall investigate and report accidents in accordance with this section. There are two general categories of accidents as defined below.

a. Crane accidents are those that occur during operation of category 1, 2, 3, or 4 cranes.

b. Rigging gear accidents are those that occur when gear covered by reference (a), section 14 is used by itself in weight handling operation, i.e., without category 1 through 4 cranes, or when covered gear is used with multi-purpose machines, material handling equipment, (e.g., forklifts) and with equipment covered by NAVFAC P-300 in a weight handling operation.

2. Crane Operating Envelope

For the purpose of this definition, it is assumed there is an "operating envelope" around any crane, and inside the envelope are the following elements:

a. The crane

b. The operator

c. The riggers and crane walker

d. Other personnel involved in the operation (Supervisor, mechanic, tag-line handler, engineer, etc.)

e. The rigging gear between the hook and the load

f. The load

g. The crane’s supporting structure (ground, rail, etc.)

h. The lift procedure

3. Crane Accident

A crane accident occurs when any of the elements in the crane operating envelope fails to perform correctly during operation, including operation during maintenance or testing resulting in the following:

a. Personnel injury or death (Minor injuries that are inherent in any industrial operation, including strains and repetitive motion related injuries, shall be reported by the normal personnel injury reporting process of the activity in lieu of these requirements.)

b. Material or equipment damage

c. Dropped load

d. Derailment

e. Two-blocking

f. Overload (This includes load tests when the test load tolerance is exceeded.)

g. Collision (Any unplanned contact between the load, crane, and/or other objects.

h. A component failure, e.g., motor burnout, gear tooth failure, bearing failure, etc., is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components, e.g., dropped boom, dropped load, roll over, etc. Items (c) through (g) are considered accidents even though no material damage or injury occurs.)

Exception: If a crane is used as an anchor point for a portable hoist/rigging gear, a rigging gear accident as defined in paragraph 1.b. is not considered a crane accident if the crane

is not being operated (no functions are in motion) at the time of the rigging gear accident, unless the accident results in an overload or damage to the crane, in which case it shall be reported as a crane accident.

4. Rigging Gear Operating Envelope

For the purpose of this definition, it is assumed there is an "operating envelope" around any weight handling operation, and inside the envelope are the following:

a. Rigging gear and miscellaneous equipment covered by reference (a), section 14

b. The end-user of the gear or equipment

c. Other personnel involved in the operation (supervisor, mechanic, tag-line handler, etc.)

d. The load

e. The gear or equipment's supporting structure

f. The load's rigging path

g. The rigging procedure

5. Rigging Gear Accident

A rigging gear accident occurs when any of the elements in the rigging gear operating envelope fails to perform correctly during weight handling operations resulting in the following:

a. Personnel injury or death (Minor injuries that are inherent in any industrial operation, including strains and repetitive motion related injuries, shall be reported by the normal personnel injury reporting process of the activity in lieu of these requirements.)

b. Material or equipment damage that requires the damaged item to be repaired because it can no longer perform its intended function (this does not include superficial damage such as scratched paint, damaged lagging, or normal wear on rigging gear)

c. Dropped load

d. Two-blocking of cranes and powered hoists covered by reference (a), section 14

e. Overload (this includes load tests when the test load tolerance is exceeded)

f. A component failure, e.g., motor burnout, gear tooth failure, bearing failure, etc., is not considered an accident solely due to material or equipment damage unless the component failure results in damage to other components, e.g., dropped load, damaged load, etc. Items (c) through (e) are considered accidents even though no material damage or injury occurs.

6. Reporting an Accident

Upon having an accident or having seen evidence of damage (suspected accident); the crane team, riggers, equipment users, etc., shall stop all operations and notify the immediate supervisor(s). If there is impending danger to the equipment or personnel, place the crane and/or load in a safe position prior to notifying a supervisor. Ensure the accident scene is secured and undisturbed to facilitate the investigation. The supervisor shall review the situation and take any further emergency action, including stopping production work or other operations that could aggravate the situation. The supervisor shall immediately notify management personnel, including the Safety Manager and the WHE Program Manager. The WHE Program Manager shall ensure the certifying official is immediately notified. Supervisors shall ensure that the crane and/or rigging operation remain secured until the Safety Manager and certifying official (if applicable) gives authorization for continuance.

a. Initial Notification. The Safety Manager shall notify the NCC (Code 07) by fax (757-967-3808), phone, or e-mail (nfsh_ncc_accident@navy.mil) as soon as practical but no later than 24 hours after an accident involving a fatality, in-patient hospitalization, overturned crane, collapsed boom, or any other major damage to the crane, load, or adjacent property. For all other accidents, notify the NCC as soon as practical but no later than three working days after the accident. If notification is by fax or e-mail, provide a point of contact for additional information.

b. Investigation and Reporting. For each suspected accident, department heads (KOs or CORs for contracted cranes, contracted rigging services, contracted multi-purpose machines, material handling equipment [e.g., forklifts], and construction equipment when used as cranes to lift suspended loads), will promptly perform a comprehensive investigation. Department heads, Kos or CORs shall prepare a Crane or Rigging Gear Accident Report, Figure 6-1, and forward a copy to the Safety Manager within 15 calendar days of the accident. The Safety Manager shall then forward to the NCC (Code 07) within 30 calendar days of the accident. The department head or KO who is responsible for the weight handling operation at the time of the accident will initiate and submit the accident report. If the crane or rigging gear is owned by another activity, obtain concurrence from the activity that owns the equipment prior to submitting to the NCC. If possible, photographs of the accident scene and material/property damage will be taken, and attached to the report.

7. Near Misses and Other Unplanned Occurrences

For each near miss or other unplanned occurrence, department heads (KOs for contracted cranes, contracted rigging services, contracted multi-purpose machines, material handling equipment [e.g., forklifts], and construction equipment when used as cranes to lift suspended loads) shall promptly perform an investigation. Near misses and other unplanned occurrences with lessons to be learned that do not fall under the crane and rigging gear accident definitions, shall be reported using Figure 6-2 (Near Miss Report) to the WHE Program Manager and the Safety Manager within 10 calendar days of the near miss or other unplanned occurrence. The Safety Manager shall forward to the NCC (Code 07) within 30 calendar days of the near miss or other unplanned occurrence. A near miss is a situation where an accident was avoided by mere chance or where intervention prevented an ongoing sequence of events that would have resulted in an accident. It is not intended that the investigation and report be as thorough as that for a crane or rigging gear accident. However, the investigation and report should be commensurate with the significance of the event.

8. Figure 6-1 Crane and Rigging Gear Accident Report

FOR OFFICIAL USE ONLY

CRANE AND RIGGING GEAR ACCIDENT REPORT

Accident Category: ☐ Crane Accident ☐ Rigging Gear Accident

From: UIC:	To: Navy Crane Center Bldg 491 NNSY Portsmouth, VA 23709 Fax (757) 967-3808
Activity:	Report No:
Crane No: / Category: / Accident Date: / Time: hrs	
Category of Service: ☐ SPS ☐ GPS / Crane Type: / Crane Manufacturer:	
Was Crane/Rigging Gear Being Used in SPS? Yes No	Was Crane/Rigging Gear Being Used in a Complex Lift/Critical non-crane rigging operation? Yes No
Location:	Weather:
Crane Capacity: / Hook Capacity: / Weight of Load on Hook:	
Fatality or Permanent Disability? ☐ Yes ☐ No / Material/Property Cost Estimate:	
Reported to NAVSAFECEN? ☐ Yes ☐ No	

Accident Type:
☐ Personal Injury ☐ Overload ☐ Derail ☐ Damaged Rigging Gear
☐ Load Collision ☐ Two Blocked ☐ Dropped Load ☐ Damaged Crane
☐ Crane Collision ☐ Damaged Load ☐ Other Specify _____

Cause of Accident:
☐ Improper Operation ☐ Equipment Failure ☐ Inadequate Visibility
☐ Improper Rigging ☐ Switch Alignment ☐ Inadequate Communication
☐ Track Condition ☐ Procedural Failure ☐ Other Specify _____

Chargeable to:
☐ Crane Walker ☐ Rigger ☐ Operator
☐ Maintenance ☐ Management/Supervision ☐ Other Specify _____

Crane Function:
☐ Travel ☐ Hoist ☐ Rotate ☐ Luffing ☐ Telescoping ☐ Other ☐ N/A

Is this accident indicative of a recurring problem? ☐ Yes ☐ No

If yes, list Accident Report Nos.: _____

ATTACH COMPLETE AND CONCISE SITUATION DESCRIPTION AND CORRECTIVE/PREVENTIVE ACTIONS TAKEN AS ENCLOSURE (1). Include probable cause and contributing factors. Assess damages and define responsibility. For equipment malfunction or failure, include specific description of the component and the resulting effect or problem caused by the malfunction or failure. List immediate and long term corrective/preventive actions assigned and respective codes.

Preparer:	Phone and email	Code	Date

Concurrences:

	Code	Date
	Code	Date
Certifying Official (Crane Accidents Only):	Code	Date

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CRANE AND RIGGING GEAR ACCIDENT REPORT INSTRUCTIONS

This form is designed for fax transmission without a cover page or by e-mail and, with enclosures and signatures, shall be the official document. Electronic submission will be accepted without signatures but the names of the preparer, concurring personnel, and certifying official (for crane accidents only) shall be filled in. The e-mail address is m_nfsh_ncc_accident@navy.mil. The fax number is (757) 967-3808.

1. Accident Category: Indicate either crane accident or rigging gear accident.
2. From: The naval activity that is responsible for reporting the accident and UIC number.
3. Activity: The naval activity where the accident took place.
4. Report No.: The activity assigned accident number (e.g., 95-001).
5. Crane No.: The activity assigned crane number (e.g., PC-5), if applicable.
6. Category: Identify category of crane (i.e., 1, 2, 3, or 4), if applicable.
7. Accident Date: The date the accident occurred.
8. Time: The time (24 hour clock) the accident occurred (e.g., 1300).
9. Category of Service: Check the applicable service (SPS as defined by NAVSEA 0989-030-7000).
10. Crane Type: The type of crane involved in the accident (e.g., mobile, bridge), if applicable.
11. Crane Manufacturer: The manufacturer of the crane (e.g., Dravo, Grove, P&H), if applicable.
12. SPS: Was the crane or rigging gear being used in an SPS lift?
13. Complex lift: Was the crane or rigging gear being used in a complex lift?
14. Location: The detailed location where the accident took place (e.g., building 213, dry dock 5).
15. Weather: The weather conditions at time of accident (e.g., wind, rain, cold).
16. Crane Capacity: The certified capacity of the crane (e.g., 120,000 pounds), if applicable.
17. Hook Capacity: The capacity of the hook involved in the accident at the max radius of the operation, if applicable.
18. Weight of Load on Hook: If applicable, the weight of the load on the hook.
19. Fatality or Permanent Disability?: Check yes or no.
20. Material/Property Cost Estimate: Estimate total cost of damage resulting from the accident.
21. Reported to NAVSAFECEN?: Self-explanatory.
22. Accident Type: Check all that apply.
23. Cause of Accident: Check all that apply.
24. Chargeable to: Check all that apply.
25. Crane Function: Check all functions in operation at time of accident. Check N/A if a rigging gear accident.
26. Is this a recurring problem?: Check yes or no. Identify any other similar accidents.
27. Situation Description/Corrective Actions: Self-explanatory.
28. Preparer: Self-explanatory.
29. Concurrences: Self-explanatory.
30. Certifying Official (Crane Accidents Only): Self-explanatory.

9. Figure 6-2 Crane and Rigging Gear Near Miss Report

OFFICIAL USE ONLY

CRANE AND RIGGING GEAR NEAR MISS REPORT

Near Miss Category: ☐ Crane Near Miss ☐ Rigging Gear Near Miss			
From: UIC:		To: Navy Crane Center Bldg 491 NNSY Portsmouth, VA 23709 Fax (757) 967-3808 nfsh_ncc_accident@navy.mil	
Activity:			Report No:
Crane/Equipment No:	Category:	Near Miss Date:	Time: hrs
Category of Service: ☐ SPS ☐ GPS		Crane /Equipment Type:	Crane/Equipment Manufacturer:
Location:		Weather:	
Crane/Equipment Capacity:	Hook Capacity:	Weight of Load on Hook:	

Is this near miss indicative of a recurring problem? ☐ Yes ☐ No

If yes, list report numbers: _____

In the space below, include a brief description of the event and corrective actions taken to prevent recurrence:

Preparer:	Phone and email	Code	Date

CRANE AND RIGGING GEAR NEAR MISS INSTRUCTIONS

This form is designed for fax transmission without a cover page or by e-mail and, with enclosures and signatures, shall be the official document. Electronic submission will be accepted without signatures but the names of the preparer, concurring personnel, and certifying official (for crane accidents only) shall be filled in. The e-mail address is nfsh_ncc_accident@navy.mil. The fax number is (757) 967-3808.

1. Near Miss Category: Indicate either crane or rigging gear near miss.
2. From: The naval activity that is responsible for reporting the near miss and UIC number.
3. Activity: The naval activity where the near miss took place.
4. Report No.: The activity assigned near miss number (e.g., 95-001).
5. Crane No.: The activity assigned crane number (e.g., PC-5), if applicable.
6. Category: Identify category of crane (i.e., 1, 2, 3, or 4), if applicable.
7. Near Miss Date: The date the near miss occurred.
8. Time: The time (24 hour clock) the near miss occurred (e.g., 1300).
9. Category of Service: Check the applicable service (SPS as defined by NAVSEA 0989-030-7000).
10. Crane Type: The type of crane involved in the near miss (e.g., mobile, bridge), if applicable.
11. Crane Manufacturer: The manufacturer of the crane (e.g., Dravo, Grove, P&H), if applicable.
12. Location: The detailed location where the near miss took place (e.g., building 213, dry dock 5).
13. Weather: The weather conditions at time of the near miss (e.g., wind, rain, cold).
14. Crane Capacity: The certified capacity of the crane (e.g., 120,000 pounds), if applicable.
15. Hook Capacity: The capacity of the hook involved in the near miss at the maximum radius of the operation, if applicable.
16. Weight of Load on Hook: If applicable, the weight of the load on the hook.
17. Is this a recurring problem?: Check yes or no. Identify any other similar near misses or accidents.
18. Situation Description/Corrective Actions: Self-explanatory.
19. Preparer: Self-explanatory.

Section 7: CRANE TEAM MEMBERS' QUALIFICATION AND LICENSING

1. Crane Operator Criteria

Crane operators shall meet the criteria for licensing as detailed in reference (a), sections 6 through 8. Portable A-frames and portable gantries with permanently installed hoists are category 2 or 3 cranes and operators shall qualify as category 2 or 3 crane operators per this section.

a. Licensing is not required for operators of category 3 non-cab operated cranes. However, category 3 non-cab operated crane operators shall be trained in accordance with reference (a), section 13 and qualified in accordance with reference (a), Appendix N requirements as identified in Figure 7-1.

b. Category 1 and 2, category 3 cab-operated, and category 4 cranes shall be operated only by qualified and licensed personnel within the restrictions of their licenses. Licenses will indicate the specific category, type, and capacity of crane that the operator is qualified to operate. The licensing of an individual on one category of crane does not permit the operation of any other category of crane except that for which the operator is licensed.

2. Administrative Responsibilities

a. The WHE Program Manager shall maintain crane operator license records, reference (a) training, and Appendix N qualifications, as applicable, for building 1100 crane operators and ensure refresher training is conducted in accordance with reference (a), section 13.

b. CED 1 and 2 Load Test Directors shall maintain crane operator license records, reference (a) training, and Appendix N qualifications, as applicable, for CED crane team personnel and ensure refresher training is conducted in accordance with reference (a), section 13.

c. The MUSE Program Manager shall maintain reference (a) training and Appendix N qualifications, as applicable, for MUSE crane team personnel and ensure refresher training is conducted in accordance with reference (a), section 13.

d. Departments are responsible for funding the training, qualification, or licensing of crane operators.

3. Category 3 Non-cab Crane Trainee Restrictions

During hands-on performance checkout for category 3 non-cab crane training, the following restrictions shall apply:

a. The trainee shall only operate equipment under the direct guidance of a qualified operator.

b. The qualified operator assumes full responsibility for the safe operation of the crane during all training.

c. The trainee must demonstrate knowledge and ability to operate the crane without a load attached prior to operating with a load.

d. Trainees shall not perform complex lifts.

4. Operator License Guidelines

Operator licenses will be renewed in accordance with reference (a), section 6 through 8.

a. License revocation actions will be conducted in accordance with reference (a), section 8. A crane operator's license shall be automatically suspended if charged with an accident.

b. The licensing official or supervisors (ensure licensing official is informed) may suspend an operator license for justified cause at any time. Documentation of the suspension, justification, and renewal actions will be included in the operator's crane license record.

5. Crane Rigger Qualifications

a. Crane riggers shall be trained and qualified in accordance with reference (a), section 13 and Appendix N requirements as identified in Figure 7-2. Prior to assigning personnel to crane or rigging work supervisors shall ensure assigned personnel are qualified.

b. Users of portable (not permanently attached) manual and powered hoists on crane structures, portable gantry/A-frames, portable floor cranes, and cranes integral to larger machine systems, or other structures or equipment (for vertical lifting) shall be qualified as crane riggers.

c. Users of rigging gear or other miscellaneous equipment attached to multi-purpose machines, equipment covered by NAVFAC P-300 equipped with a winch, or material handling equipment with crane attachments shall be qualified as crane riggers per reference (a), section 14.

6. Contractor Personnel Qualifications

Contractor personnel operating, maintaining, inspecting, or testing Navy WHE shall be qualified per reference (a). DoD contractors shall provide KOs documentation that the aforementioned training, qualification, and licensing requirements are met. CORs and their designated representatives (as applicable) shall verify that the contractor provided documentation of the aforementioned requirement prior to the contractor operating Navy WHE.

7. Figure 7-1 Category 3 Non-Cab WHE Operator Qualification Checklist

NAME (printed) _____

1. Personnel who operate category 3 non-Cab WHE shall demonstrate (to the satisfaction of their supervisors) adequate knowledge and/or skill in the areas listed below. Supervisor, make a check mark on short line before each item indicating satisfaction.

____ Prerequisite, Completion of NCC-C3CS-1.0 Category 3 Crane Safety.

Operator of category 3 non-cab WHE. (For the specific type of equipment being operated and the types of lifts the operator shall be required to make.)

____a. Operation of the equipment.
____b. Determining the weights of loads.
____c. Determining the center of gravity of loads.
____d. Planning the crane/load movement path and checking for clearances.
____e. Selecting and properly using appropriate rigging equipment.
____f. Basic knots, bends, and hitches, and their use.
____g. Performing necessary calculations to determine the allowable capacity of rigging configurations.
____h. Selecting appropriate attachment points on loads to be lifted.
____i. Performing prior-to-use visual inspections of rigging equipment.
____j. Performing prior-to-use inspection and operation of WHE being operated.
____k. Directing of other personnel assisting in the rigging evolution.
____l. Accident and equipment deficiency problem recognition and reporting procedures.
____m. Proper crane communications, i.e., hand signals (See reference (a) Figures 10-1 and 10-2), radio communications, etc.

Qualifier Name Printed_____
Qualifier Name Signature_____Date_____
Supervisor Name Printed_____
Supervisor Signature_____

Supervisor Retain.

Copy To: NAVFAC EXWC WHE Manager or CED Load Test Director for CED personnel

8. Figure 7-2 Rigger Qualification Checklist

NAME (printed) _____

1. Personnel who perform functions as a rigger will demonstrate (to the satisfaction of their supervisors) adequate knowledge and/or skill in the areas listed below. Department or command WHE representative, make a check mark on short line before each item indicating satisfaction.

_____Prerequisite, Completion of NCC-CR-03 Crane Rigger

_____a. Determining the weights of loads.
_____b. Determining the center of gravity of loads.
_____c. Planning the crane/load path and checking for clearances.
_____d. Selecting and properly using appropriate rigging equipment.
_____e. Basic knots, bends, and hitches and their use.
_____f. Performing necessary calculations to determine the allowable capacity of rigging configurations.
_____g. Selecting appropriate attachment points on loads to be lifted.
_____h. Performing prior-to-use visual inspections of rigging equipment.
i. Crane signal person functions (construction signal person, as appropriate).
_____ (1) Proper crane communications, i.e., hand signals (See reference (a) Figures 10-1 and 10-2), radio communications, etc.
_____ (2) Acceptable methods for initiating emergency stop actions and an understanding of when such actions are appropriate.
_____j. Coordinating activities of other personnel assisting in the lift (when designated as Rigger-in-Charge).
_____k. General knowledge of mobile crane configuration variations and load chart limitations.
_____l. The requirements of reference (a), section 10 (as applicable to riggers) and section 14.
_____m. Acceptable rail switch alignment requirements (as applicable).
_____n. Requirements for inspecting the crane travel path.

Dept. or Command WHE Representative Name Printed_____
Dept. or Command WHE Representative Signature_____
Supervisor Name Printed_____
Supervisor Signature_____
Final Qualification Date_____
Supervisor Retain.

Copy To: NAVFAC EXWC WHE Program Manager or CED LOAD TEST DIRECTOR FOR CED PERSONNEL

Section 8: OPERATOR CHECKLIST

1. Category 1, 2, 4, and Category 3 Cab-Operated Cranes

a. For category 1, 2, 4, and category 3 cab-operated cranes a pre-use check shall be performed and documented prior to the first use of the crane each day on reference (a) Figure 9-1, Operator's Daily Checklist (ODCL). Shortened OCDLs, customized to particular categories of cranes, may be used provided they include all attributes applicable to the particular crane covered and are approved by the respective certifying official or WHE Program Manager.

b. The ODCL will be given to the supervisor for review and signature at the end of each shift and retained. Current month plus previous month (current month plus two previous months for cranes used in construction) shall be kept in the crane history file by the respective CED 1 or 2 Certifying Official (or designated representative), OCSF Manager, or WHE Program Manager for building 1100 cranes.

2. Category 3 Non-cab Operated Cranes

For category 3 non-cab operated cranes, the operator shall perform a pre-use operational check prior to the first use of the crane each day (for cranes used in construction, the check will be performed prior to each shift the crane is used). The operational check will ensure that the crane controls, brakes, and limit switches operate properly. Hooks, hook latches, wire rope, and load chains shall be checked for proper condition and wire rope or load chain reeving. This pre-use check need not be documented. All discrepancies shall be reported to the supervisor.

3. Operator Check-list Responsibilities

a. Departmental representatives from CIOFP and EX5 shall ensure OMCLs for building 1100 DOL and GUL bridge cranes and building 1393 cranes are completed, routed to their supervisor for signature, and scanned and e-mailed to the certifying official’s representative and WHE Program Manager no later than the seventh workday of each month.

b. CIOFP is responsible for building 1100 bridge crane numbers 44, 61, and 62 and building 1393 crane numbers 4, RG019, and 24. EX5 is responsible for building 1100 bridge crane numbers 58 and 59.

c. The WHE Program Manager shall retain the current and previous month's OMCL's in the crane history file for the cranes listed in 3.a and 3.b. above.

d. CED 1 and 2 Certifying Officials shall ensure OMCL's are completed for their respective NAVFAC EXWC category 3 non-cab operated cranes no later than the seventh workday of each month and that the current and previous month's (current month plus two previous months for cranes used in construction) OMCL's are retained in the crane history file.

e. The Mobile Support Utilities Equipment (MUSE) Program Manager shall ensure OMCLs are completed for the building 1360 category 3 non-cab operated cranes no later than the seventh workday of each month, scanned, and e-mailed to the certifying official's representative. The current and previous month's OMCLs shall be retained in the crane history file.

4. WHE Deficiencies

a. When an operator, during the daily check of equipment or during operation, observes a deficiency of a load bearing part, load controlling part, or operational safety device (i.e., an asterisked item on the ODCL or OMCL); or an operating condition that could result in uncontrolled movement, failure to move as expected from a control input, or otherwise render the crane unsafe, the operator shall immediately secure the crane from further operation (to include lockout/tagout) and notify the supervisor of the deficiency observed. This includes leaks with greater than normal seepage. The supervisor shall immediately report the crane deficiency to the respective responsible person, who will then contact the crane service provider for diagnosis of the deficiency and initiation of corrective repair action, including engineering resolution as necessary. The crane will not be returned to service until such deficiencies are either corrected or evaluated by the certifying official as satisfactory for continued operation.

b. For deficiencies (other than noted in 4.a. above), the item on the ODCL or OMCL will be marked as unsatisfactory and the operator shall describe the deficiency in the remarks block. The operator's supervisor shall provide the ODCL or OMCL to the respective responsible person who shall contact the crane service provider for corrective action.

Note: Crane operators shall not affect any repairs or adjustments to NAVFAC EXWC cranes unless designated as the service provider.

Section 9: CRITICAL NON-CRANE RIGGING OPERATIONS

1. Critical Non-Crane Rigging Operations

Critical non-crane rigging operations are defined as rigging tasks that involve a higher than normal level of risk. These operations, if done improperly, could result in personnel injury, significant component damage, or overload to rigging equipment or the supporting structure. These operations include:

a. Rigging that requires precise movement of the load due to tight-tolerance fit-up and rigging gear is the primary method to control alignment (It does not normally include components installed on studs/fasteners, routine installation of pumps, motors, rotors, or when guide pins are used to control alignment)

b. Handling sensitive electronic cabinets/equipment where overhead clearances are minimal and require special handling arrangements

c. First time or infrequently performed rigging tasks that require more than normal planning, preparation, and/or operational risk management

d. Rigging of unusually expensive or one-of-a-kind equipment or components

e. Personnel suspended from rigging

f. Rigging of hazardous materials such as poisons, corrosives, highly volatile substances, etc. (Does not include oxygen, acetylene, propane, diesel fuel, gasoline in cans, or tanks that are properly secured in racks or stands designed for lifting/handling)

g. Other pre-identified rigging operations involving non-routine or specialized handling requirements, or unusual risk

2. Requirements

The applicable sections of the complex lift plan checklist in section 10 shall be completed and approved prior to conducting

critical non-crane rigging operations. The OCSF Manager, CED2 Certifying Official, or WHE Program Manager shall provide oversight as per the complex lift oversight requirements.

Section 10: COMPLEX LIFT PLAN/CHECKLIST

1. Lifting Operations Categories

Lifting operations will be classified into two basic categories, complex lifts and non-complex lifts. Except as noted, lifts of ammunition and explosives (ordnance) are considered to be a category separate from these criteria for complex/non-complex lifts. Ordnance lifts have unique procedures and approved ordnance handling equipment that must be utilized.

2. Complex Lifts

These are lifts with a moderate to high level of risk involving the criteria set forth in subparagraph a. through j. Suspended load lifts with multipurpose machines will be treated as complex lifts if the loads meet any of the criteria set forth in subparagraph a. through j. Lifts of personnel in a suspended platform with multipurpose machines is prohibited.

a. Hazardous materials, e.g., poisons, corrosives, highly volatile substances, etc. (This does not include palletized unit loads of ordnance, nor materials such as oxygen, acetylene, propane, diesel fuel, gasoline in cans, or tanks that are properly secured in racks or stands designed for lifting and transporting by crane)

b. Large and complex geometric shapes

c. Lifts of personnel (NAVAFAC EXWC seldom requires such lifts and does not maintain the required equipment or proficiency of the required skillsets. NAVFAC EXWC shall request the local base Public Works (PW) department to complete any lifts of personnel.)

d. Lifts exceeding 80% of the capacity of the crane’s hoist and lifts exceeding 50% of the hoist capacity for a mobile crane mounted on a barge (For variable rated cranes, this will be at the maximum anticipated radius planned for use. Lifts with jib cranes, pillar jib cranes, fixed overhead hoists, and monorails are excluded. Lifts of test weights during maintenance or testing when directed by a qualified load test director are excluded.)

e. Lifts of submerged or partially submerged objects; the following submerged lifts are not considered complex:

(1) Removal of valves, rotors, pipes, etc., from dip tanks for cleaning or coating purposes

(2) Lifting boats of known weight from the water if the boats are of open design with bilge compartments accessible for visual inspection, the boats have label plates indicating weights, and the boats have pre-determined lifting points established by the OEM or the activity engineering organization

(3) Lifting submerged or partially submerged objects that meet the following criteria: the object is verified to not contain fluid in pockets and/or voids that are unaccounted for in the weight of the object; the object is verified or known to not be stuck by suction or adhesion by corrosion, marine growth, excessive surface tension, mud, etc.; and the object is verified to be clear of obstructions such as other objects in the water, underwater cables, etc.

f. Multiple crane or multiple hook lifts on the same crane, except for bridge or gantry cranes with hooks coupled together and specifically designed for simultaneous lifting such as jet engine test stand lifting cranes

Note: Multiple crane or multiple hook lifts often present unique hazards, and will be considered only on a strict case-by-case basis. PW shall normally be requested to complete such lifts.

g. Lifts of unusually expensive or one of-a-kind equipment or components

h. Lifts of constrained or potentially constrained loads (binding condition)

Note: Where overloading of the crane or rigging is possible due to binding conditions, a portable load-indicating device with a read out readily visible to the signal person shall be used. When a load-indicating device is used, an appropriate stop point will be established and the load-indicating device will be carefully monitored to ensure the stop point is not exceeded.

When necessary, chain-falls or other hoisting control means will be used to avoid sudden overload of the crane or rigging gear.

i. Other lifts involving non-routine operations, difficult operations, sensitive equipment, or unusual safety risks

j. Critical non-crane rigging operations (see section 9 for definition)

3. Complex Lift Procedures

Complex lifts will be conducted per reference (a). The complex lift plan form in Figure 10-1 will be completed and approved prior to all complex lifts as defined in paragraphs 2a. through 2j. For complex lifts that are repetitive in nature requests for one approved complex lift plan form and standardized procedure covering an allotted amount of time with the same crane team will be considered by the WHE Program Manager.

4. Non-complex Lifts

Non-complex lifts are ordinary in nature and do not routinely require supervisory oversight. They may be made at the discretion of a qualified rigger.

5. Figure 10-1 NAVFAC EXWC Complex Lift Plan Form

NAVFAC EXWC COMPLEX LIFT PLAN FORM

1. Describe the type of complex lift that is being performed, refer to EXWCINST 11260.1, enclosure (1), section 10 paragraphs 2.a through 2.j.

Note: For multiple crane lifts, determine the maximum capacity for each crane and the percentage of weight each crane will lift. A safety factor of 1.5 will be used for each crane or hook. Use additional pages as necessary.

_____
_____
_____
_____
_____

2. Crane # USN _____

3. What type of communication is being used to signal the crane operator; e.g., hand signals, radio, etc.? (For multiple crane/hook lifts address the coordination of the lift)

_____
_____

4. Provide a complete description of the object to be lifted including technical manual excerpts or other OEM material pertinent to the object (e.g., HAZMAT instructions, facility plant equipment manuals, etc.)

_____
_____
_____
_____

5. Hook to be used (check all that apply):
MAIN _____ AUX _____ WHIP _____

6. Weight of object: Estimated: _____ Actual: _____

a. Method used to determine estimated weight _____

_____

7. Height, length, width of object:
_____

8. Sketch or drawing showing rigging gear configuration, capacities, and orientation with regard to the object to be lifted. (Attach separate sheet)

a. Total weight of all rigging gear:_____

9. Total combined weight of load to be lifted, including rigging gear:
_____

10. Crane configuration:

a. Number of parts of wire _____

b. Counterweight _____

c. Outrigger positions _____

d. Boom length _____

e. Boom angle _____

11. Crane deduction (as identified on the crane certification document):

a. Main _____

b. Aux _____

c. Aux boom head _____

d. Jib _____

e. Misc. _____

f. Reeving over minimum required to lift load, add 2 lbs. per ft. _____

g. Total weight of load to be lifted, including rigging gear, object, and all crane deductions:
_____

12. Planned radius: _____

13. Working load limit of crane at planned radius: _____

14. Maximum operating radius allowed: _____

15. Page of load chart used to determine capacity: _____

16. Is the crane configuration identified above sufficient to perform the lift? Yes ___ No ___

Note: All crane capacities will be based on 360-degree load chart.

17. Portable load indicating device required? Yes ___ No ___

18. Established stop points for binding conditions, or lifting submerged material (to inspect rigging gear or integral attachments, allow drainage): _____

19. Maximum allowable load, as shown on load indicator, prior to stopping for further technical resolution (i.e., contacting the cognizant technical code or original equipment manufacturer):

_____

20. Lift/crane path (to calculate counterweight and travel clearance: _____

_____

21. Identify all special conditions/precautions/prerequisites that the crane team should be aware of prior to and during the lift (e.g., special precautions for unusual shapes, half full tanks, residual water in bilges or structure, pressure equalization prior to taking a strain, submerged objects, weather condition limitations, etc.)

_____
_____
_____
_____

a. Remarks or instructions for special situations

_____
_____

22. Name of other team members/responsibilities involved in the lifts:

a. _____

b. _____

c. _____

d. _____

e. _____

23. Review and Approval Signatures: (The following individuals have reviewed the complex lift plan for completeness and confirm that all documented information is accurate.)

Mechanical Engineer Review as required (Engineering assistance shall be obtained when difficult calculations are required.)

_____	_____	_____
Print Name	Signature	Date

Crane Operator Review

_____	_____	_____
Print Name	Signature	Date

Rigger-in-Charge (RIC) Review

_____	_____	_____
Print Name	Signature	Date

OCSF Manager or CED2 Manager Review (For OCSF or CED2 lifts)

_____	_____	_____
Print Name	Signature	Date

Command WHE Program Manager Approval

_____	_____	_____
Print Name	Signature	Date

Command Safety Manager Approval

_____	_____	_____
Print Name	Signature	Date

Departmental Supervisor Approval (The department will retain a copy of this approved document for future reference.)

_____	_____	_____
Print Name	Signature	Date

24. Pre-Lift Briefing performed by RIC and OCSF Facility Manager (for OCSF complex lift) or RIC and CED2 Certifying Official for CED2, or RIC and WHE Program Manager elsewhere: Briefing will be conducted in person. OCSF Manager, or CED2 Certifying Official or WHE Program Manager shall be on site for complex lifts. If the lifts are repetitive in nature the OCSF manager, CED2 certifying official or EXWC WHE Manager shall be present during the first evolution of the lift with each crane team. This plan, including any written procedures and sketches and / or drawings must be on-site during the lift.

Rigger In Charge

_____	_____	_____
Print Name	Signature	Date

OCSF or CED2 Certifying Official or NAVFAC EXWC WHE Program Manager

_____	_____	_____
Print Name	Signature	Date

Section 11: RIGGING GEAR AND MISCELLANEOUS EQUIPMENT

1. Purpose

The purpose of this section is to provide maintenance, inspection, and test requirements in accordance with reference (a), section 14 for rigging and miscellaneous lifting equipment (hereafter referred to as rigging gear) not covered in reference (a), sections 2 through 11.

2. Applicability

a. These requirements apply to rigging gear used, with or without cranes, in weight handling operations. These requirements also apply to rigging gear used with multi-purpose machines, material handling equipment (e.g. forklifts), and equipment covered by NAVFAC P-300. These requirements also apply to contractor owned rigging gear used with Navy owned WHE, multi-purpose machines, material handling equipment, and equipment covered by NAVFAC P-300 used in weight handling operations. These requirements do not apply to contractor owned rigging gear used with contractor owned cranes, forklifts, backhoes, excavators, and front-end loaders.

b. These requirements do NOT apply to rigging gear used solely for tie down or horizontal movement. Tie down or horizontal movement equipage will be marked upon receipt with safety yellow or orange paint and will be segregated from certified rigging gear. Some rigging gear is painted yellow or orange by the OEM. Rigging gear painted yellow or orange that is in the WHE test and inspection record program and appropriately labeled as such can be utilized as WHE. Apply ORM to decision making for tie down or horizontal movement equipage. Tie down or horizontal movement equipage utilized for certain applications may very well warrant meeting reference (a) requirements as a minimum.

c. Rigging gear will be procured, tested, inspected, certified, operated, and maintained in accordance with reference (a), section 14 and this instruction.

d. Rigging gear that is not yet in a test and inspection program or is currently uncertified will be segregated from certified rigging gear. Departmental/divisional WHE

representatives shall store such gear in a locked container and the container will be labeled (using Figure 11-5) that it contains uncertified WHE equipment. Large items of rigging gear that cannot be reasonably stowed in a locked container will be labeled as uncertified using the label in Figure 11-5. The departmental/divisional WHE representative and WHE manager (for building 1100) or CED1 and CED2 Certifying Officials shall hold the only keys for the lockers.

3. Record Keeping

a. Initial and periodic inspections and load tests required by reference (a), section 14 will be completed and documented in a rigging gear history file for each piece of rigging gear. Computer generated rigging gear records will be used that identify the individual components, dates of inspections and tests, and inspection/test results. Computer generated master records will be protected such that only the departmental, divisional, and command WHE representatives have editing access; all others will have read only access. Figures 11-1 through 11-4 (Rigging Gear Template) or equivalent shall be used to document the above requirements. All load (proof) test certificates and other documentation required for certification shall be retained in the rigging gear history file. Departmental/divisional WHE representatives shall maintain the aforementioned rigging gear history records and files for the in service life of their respective rigging gear.

b. OCSF WHE is maintained by a contractor that uses a Preventive Maintenance System (PMS) as a rigging gear history record. OCSF shall utilize their PMS (where applicable) in lieu of Figures 11-1 through 11-4. OCSF shall ensure the PMS includes the rigging gear history and record keeping requirements required by paragraph 2 above and reference (a).

c. Each piece of certified rigging gear shall be assigned a unique serial/identification number that will allow the gear to be tracked to its specific history record.

d. If the rigging gear is deployed, copies of the rigging gear record will accompany the rigging gear.

4. Rigging Gear Procurement

Rigging gear will be procured in accordance with section 14 or 15, as applicable.

5. Rigging Gear Identification

Identification and marking is required to ensure the rigging gear being used is part of the certification program. Each piece of rigging gear will be tagged, engraved, or otherwise marked with specific information, i.e., serial number, Work Load Limit (WLL), periodic inspection due dates, in accordance with paragraph 11 of this section. Subordinate parts of multi-part rigging gear that can be separated will be marked in accordance with reference (a), section 14. Below-the-hook lifting devices weighing more than 100 pounds will be marked with the weight of the device.

6. Rigging Gear Initial Use

Prior to initial use, departmental/divisional representatives or in their absence, the WHE Program Manager or certifying official, shall ensure load testing and inspecting of rigging gear is accomplished and documented in accordance with reference (a), section 14 and this enclosure. Command, departmental, divisional, and/or certifying official representatives shall be qualified rigging gear inspectors.

7. Rigging Gear Re-certification

Prior to being re-certified; in accordance with reference (a), section 14; periodic inspections (and load tests as required) will be accomplished or verified by the departmental/divisional WHE representatives or in their absence, the WHE Program Manager or certifying official. These periodic inspections shall be documented in the rigging gear history file in accordance with reference (a), section 14.

8. Pre-use Inspection (Also Known as Frequent Inspection)

Rigging gear will be visually inspected by personnel prior to each use to verify rated load, OEM markings, inspection status (colored tape or tag), serial number, and condition. No documentation of pre-use inspection is required.

a. Defective, damaged, and/or uncertified rigging gear must be marked or tagged in a way that indicates it is not to be used for lifting and must also be segregated from certified "ready to use" gear.

b. Unsatisfactory rigging gear will be immediately removed from service by the departmental/divisional WHE representatives and appropriately disposed of.

9. Repairs

Repairs and alteration of rigging gear must be in accordance with reference (a), section 14.

10. Lifting Work

All lifting work utilizing rigging rear will be accomplished in accordance with reference (a), sections 10 and 14. Personnel using rigging gear must be trained and qualified as crane riggers in accordance with section 7.

11. Rigging Gear Marking

Color-coded tape will be used to identify rigging gear that is in the authorized for use, test, and inspection record program. Annual periodic inspections will be completed by departmental/divisional representatives in June of each calendar year with the previous year’s inspection expiring the last day of June. Using number (2) below as an example, rigging gear color coded Green may have been inspected the first day of June 2011 and may be used until the last day of June 2012. If rigging gear marked green has not had the annual periodic inspection completed prior to the 1st day of July 2012 the gear will be segregated from the ready for issue rigging gear and will be stored in a locked un-certified WHE storage area and identified as such.

a. Rigging gear placed into the system within a calendar year will be color coded as per the following example. Rigging gear placed into the record from July 1st 2011 through the last day of May 2012 will be color coded Green. The color codes listed will be used.

(1) June 2010 – June 2011 (Yellow)

(2) June 2011 - June 2012 (Green)

(3) June 2012 – June 2013 (Red)

(4) June 2013 - June 2014 (Blue)

(5) June 2014 – June 2015 (Orange)

(6) June 2015 – June 2016 (Green)

(7) June 2016 – June 2017 (Red)

(8) June 2017 – June 2018 (Blue)

(9) June 2018 – June 2019 (Orange)

(10) June 2019 – June 2020 (Green)

(11) June 2020 – June 2021 (Red)

b. In work areas where certified rigging gear is stored and/or utilized, the year/color indicators will be posted as an immediate reference for crane riggers to determine the current annual color code.

c. CED2 is authorized to use tags (in lieu of tape) with inspection and expiration dates that identifies Gulfport's rigging gear is in the authorized for use, test, and inspection record program. Due to the large amount of rigging gear that CED2 is responsible for, the inspections may be staggered throughout the year versus every June as mentioned above.

Note: Color coded cable ties (tie wraps) may be used on small rigging gear where the use of tape would cover the OEM markings.

12. Inspection Waivers

Project managers of projects involving WHE shall request waivers from the WHE Program Manager for a different calendar month to support their periodic inspection program. This does not imply waivers will be granted for extensions of the annual periodic inspections and tests (as required). The WHE Program Manager

will consider the rigging gear location and the risk of it being confused with rigging gear meeting the requirements of paragraph 11 (above) during the approval/disapproval process. If a waiver is authorized, the waiver, including the alternate month and color indicator, will be displayed at the location of the rigging gear and all crane team members (in that work area) shall be made aware of the waiver. Colors other than those used in paragraph 11 above will be used to avoid confusion. The goal is to keep continuity throughout the command for all annual rigging gear periodic inspections/tests and the color indicating such. Waivers should be the exception not the rule.

13. Rigging Gear on Ships

Rigging gear meeting the requirements of this section and reference (a) may be utilized aboard ships (other than United States Navy (USN) commissioned vessels, while underway). If working (other than pier side) aboard USN commissioned vessels, the requirements of Naval Ships Technical Manual 589 (CRANES) shall be followed.

14. NBVC Load Cells

Load cells that are purchased for projects are to be turned into the Energy Management and Programs Branch (PW61) following the project. PW61 shall serve as a centralized storage location. Prior to purchasing load cells for a project, PW61 shall be contacted and queried if a load cell in the centralized storage meets the requirements for the project. If a load cell is available, it will be issued to the project's departmental/divisional WHE representative who will include it into the departmental/divisional rigging gear record/history file following the completion of any certification and/or calibration requirements. Funding for certification and calibration will be the responsibility of the project. PW61 does not have the authority to certify the load cells, but will keep all previous certification/calibration requirement records on file and issue to the departmental/divisional WHE representatives when a load cell is checked out. The goal of this system is to reduce government expenditures for equipment that is seldom used and scattered about. In all situations, load cells used for lifting must meet the certification requirements of reference (a) and be in a departmental/divisional rigging gear record/history file.

15. Figure 11-1 Rigging Gear Templates (Slings)

Manufacturer	Description including color if desired	Work Load Limit	Test (proof) Load	Test (proof) CERT #	Test (proof) date	Serial ID #	Location	Initial Insp. In Service Date	Periodic Insp. Date	Periodic Insp. Result SAT / UNSAT	Inspector Name	Notes	Periodic Insp. Due Month/Year

16. Figure 11-2 Rigging Gear Templates (Shackles)

Manufacturer	Description including Color if Desired	Work Load Limit	Test (Proof) Load	Test (Proof) CERT #	Test (Proof) Date	Serial / ID #	Location	Initial Insp. In Service Date	Periodic Inspection Date	Periodic Inspection Result SAT / UNSAT	Inspector Name	Notes	Periodic Inspection Due Month/Year

17. Figure 11-3 Rigging Gear (Miscellaneous)

Manufacturer	Description including Color if Desired	Work Load Limit	Test (Proof) Load	Test (Proof) CERT #	Test (Proof) Date	Serial / ID #	Location	Initial Insp. In Service Date	Periodic Inspection Date	Periodic Inspection Result SAT / UNSAT	Inspector Name	Notes	Periodic Inspection Due Month/Year

18. Figure 11-4 Rigging Gear Template (Equipment Requiring Periodic Load Test)

Manufacturer	Description including color if Desired	Work Load Limit	Test (Proof) Load	Test (Proof) CERT #	Test (Proof) Date	Serial ID #	Location

Initial Insp. In Service Date	Periodic Insp. Date	Periodic Insp. Results SAT / UNSAT	Inspector Name	Notes	Periodic Insp. Due Month/Year	Periodic Proof Test Due Date	Portable Manual Hoist 6-Year disassembly Due Date	Portable Manual Hoist Controlled Storage Y/N	Controlled Storage security seal #

19. Figure 11-5 Identifying Information for Uncertified WHE

UNCERTIFIED WEIGHT HANDLING EQUIPMENT (WHE)

MUST MEET NAVFAC P-307 REQUIREMENTS AND BE ENTERED INTO DEPARTMENTAL WHE RECORD PRIOR TO ISSUE.

May be used as tie down or horizontal movement (non below the hook) if appropriately marked. Contact departmental WHE representative or command WHE manager for inventory, certification requirements, and issue.

CODE_____

CONTACT_____
PHONE#_____

OR CONTACT_____
PHONE#_____

Section 12: WHE LOCKOUT/TAGOUT PROCEDURES

1. Purpose

To establish procedures for lockout/tagout of WHE in order to prevent accidents and injuries caused by the accidental release of energy or the operation of defective WHE.

2. Applicability

These procedures are applicable to all categories of WHE at all NAVFAC EXWC locations, and cover servicing and maintenance of equipment where unexpected energizing, start-up, or release of stored energy could harm personnel.

3. Policy

The Lockout/Tagout Program for WHE shall be performed in accordance with this instruction and reference (b). These procedures will be used for the protection of equipment and personnel engaged in the maintenance, inspection, and repair of equipment. Violation of these procedures by the operation of WHE equipment in a lockout or tagout status or unauthorized removal of a lockout or tagout device will result in disciplinary action.

a. Lockout or tagout devices will indicate the identity of the employee applying the device.

b. When lockout is not feasible, tagout may be used with the approval of the Command Safety Office.

c. No two lockout devices (locks) will have the same key. No more than two keys will exist for any lock.

4. Definitions

a. Repairman. Any person(s) designated to test, inspect, service, repair, or who might otherwise come in contact with WHE. For maintenance work, the repairman may be a mechanic, inspector, maintenance contractor, or any other person who is charged with the responsibility.

b. Operator. Personnel operating WHE. Operators are only authorized to operate a crane when it is certified for use or has been designated for load test by the Load Test Director.

c. Energy isolating device. A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can be disconnected from all underground supply connectors, and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches, and other control circuit type devices are not energy isolation devices.

d. Tagout. The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the device is removed.

e. Tagout device. A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

f. Lockout. The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolation device and the equipment being controlled cannot be operated until the lockout device is removed.

g. Lockout Device. A device that utilizes a positive means such as a lock (keyed type), to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment.

5. Procedures for Lockout/Tagout

Upon discovering a problem with WHE, or prior to performing maintenance immediately lockout the WHE.

Note: When lockout is not feasible tagout may be used with the approval of the Command Safety Office.

6. Safe Release of Stored Energy

Equipment must be de-energized before servicing or maintenance work can begin.

a. Drain all valves, bleed all air from a system, eliminate stored hydraulic pressure, or use any method to release energy that is detailed in equipment-specific procedures.

b. Test the machine to assure that all energy is disconnected or released.

7. Restoring Power

a. After servicing is completed, remove all tools from the area and replace all machine guards.

b. Inform supervisors and all affected personnel of repair's completion and that the power will be restored.

c. Remove the lockout/tagout device and reconnect all sources of energy. Equipment may be operated at this point.

d. Return all lockout/tagout devices to proper storage locations.

8. Lockout/Tagout Device Durability

a. Lockout devices will be substantial enough to prevent removal without the use of excessive force or unusual techniques, such as with the use of bolt cutters or other metal cutting tools.

b. Tagout devices, including their means of attachment, will be substantial enough to prevent inadvertent or accidental removal, non-reusable, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one piece all environment tolerant nylon cable tie.

c. Both locks and tags must be durable enough to withstand the environment to which they are exposed for the maximum period of time that the exposure is expected.

9. Contractor Compliance

Contractors operating or servicing WHE must fully comply with lockout/tagout procedures in this instruction.

Section 13: MOTOR VESSEL INDEPENDENCE

1. The government owned (NAVFAC EXWC administrative and operational control) contractor operated Motor Vessel Independence (MVI) utilizes a myriad of rigging gear as defined in reference (a), section 14. MVI will follow the requirements of reference (a), section 14 and the requirements of sections 11 and 15 of this instruction for the procurement, test, inspection, operation, and record keeping requirements of rigging gear and below-the-hook lifting devices (exceptions listed below). The MVI COR shall be designated as the MVI WHE division representative and shall ensure that these requirements are adhered.

a. Due to shipboard space limitations, segregated storage for certified rigging gear and uncertified tie down or horizontal movement equipment is not available onboard MVI, therefore, such equipment may be stored in the same space.

(1) To avoid confusion with standardized shipboard equipment and systems marked with safety yellow or orange paint; MVI will use pink as their unique identifier for loose; uncertified; reference (a), section 14 equipment being used as tie down/horizontal movement equipment in lieu of the markings identified in section 11.

(2) Standard shipboard equipment that is listed as rigging gear in reference (a), section 14, but is not used as rigging gear for lifting suspended loads will not be marked with the unique identifier (pink) for horizontal or tie down equipment. Examples include, but are not limited to, mooring lines, general use line and wire rope, shrouds, stays, signal pendant lines (including associated hardware), anchor chain, ground tackle, life lines, and hardware for securing lifelines, etc.

(3) In lieu of the color codes identified for certified rigging gear in section 11, the MVI will use white, brown, gray, and violet.

b. This instruction does not apply to the certification of MVI cranes. MVI cranes are certified by an authority other than NAVFAC P-307.

Section 14: PROCUREMENT OF WHE (RIGGING GEAR) USING PURCHASE CARD REQUISITION

1. Purpose

To provide NAVFAC EXWC policy and procedure for the procurement of equipment listed on reference (a), Table 14-1. Purchase cards shall not be used to rent contractor operated cranes; multi-purpose machines; material handling equipment (e.g., forklifts); or construction equipment, when used as cranes to lift suspended loads and rigging equipment used in weight handling operations.

2. Rigging Gear Submitted by Requisition

Departmental WHE representatives or the WHE Program Manager must approve the certification requirements prior to requisitions submittal. Contractor operated cranes; multi-purpose machines; material handling equipment (e.g., forklifts); construction equipment, when used as cranes to lift suspended loads; and rigging equipment in weight handling operations, when the equipment is used on Navy property to lift suspended loads, can be purchased using requisitions. Section 16 requirements shall be included as part of the requisition request.

3. Purchasing and Testing WHE

When purchasing any of the equipment or testing any existing equipment listed within reference (a), Table 14-1, the WHE block on the requisition form will be checked.

a. The command purchase card requisition and log form includes WHE as a technical screening element and must be reviewed and approved by a departmental WHE representative or the WHE Program Manager.

b. Divisional WHE representatives do not have the authority to sign the Weight Handling Manager/Representative technical screening element block. **See page 19 for approving official's responsibilities.**

4. Requisition Form Requirements

a. The WHE representative shall ensure that the equipment, testing requirements, and documentation of certification requirements are consistent with reference (a) and are listed on the requisition. Requestors or end users are encouraged to enter the WHE specific requirements, testing requirements, and documentation of certification requirements per reference (a) into the Purpose/Justification "special instructions" block.

Note: It is not acceptable to simply use “reference (a)” for the testing and documentation requirements. Applicable testing and documentation requirements will be withdrawn from reference (a) and listed on the requisition form.

b. If the equipment is included in reference (a), Figure 14-1 and will be used only as a tie down for horizontal movement, the WHE representative shall indicate such on the requisition. Tie down/horizontal movement equipage does not have to meet reference (a) requirements.

c. The WHE representative shall keep a copy of the requisition for tracking purposes; ensuring the WHE ends up in the departmental WHE record.

5. Requisition Form Submittal

Once signed by the WHE representative and authorizing official, submit the requisition form to the card holder for purchase.

6. Receiving Process

When the equipment is received, it must be taken to the departmental/divisional WHE representative.

a. The departmental/divisional representative shall ensure that the equipment testing requirements and documentation of certification requirements are satisfactory. Then they will serialize the equipment, enter into the departmental rigging gear record/history file, and issue it to the requestor or end user.

b. If the equipment is for tie down and/or horizontal movement, the departmental/divisional WHE representative shall

mark it as such by spray painting it safety yellow or orange. WHE equipage and tie down/horizontal movement equipage will be kept segregated.

7. Collateral Duty

Departmental, divisional, and command WHE representatives are identified on the NAVFAC EXWC collateral duties notice.

8. Providing a Job order Number (JON)

End users shall provide the departmental or command representative with a JON for the labor involved.

9. Agency Program Coordinator (APC)

The APC shall identify WHE purchases that are erroneously coded in the monthly GPC audit and notify the WHE Manager of any errors.

Section 15: PROCUREMENT OF GOVERNMENT OWNED WHE (RIGGING GEAR) BY GOVERNMENT CONTRACTORS

1. Procurement Process and Policy

Due to the nature of projects that NAVFAC EXWC manages and supports, contractors are often required to procure Government (Navy) owned rigging gear in support of the project. DoD contractors shall procure Government (Navy) owned rigging gear in accordance with the following:

a. CORs and project managers shall ensure one contractor employee is qualified as rigging gear inspector (RGI) per reference (a) and the contractor shall utilize their RGI to perform the WHE representative requirements of section 14 4. a. of this instruction. DoD contractors shall provide the KO/COR documentation that the aforementioned training and qualification requirements are met.

b. A WHE (rigging gear) Record Program will be established for the project, and all rigging gear will meet the requirements of reference (a) and section 11 of this instruction and entered into the projects rigging gear record prior to use.

c. The project manager shall identify in writing the project team member that will perform the duties as the project WHE representative. The project WHE representative shall perform the duties equivalent to those assigned to the departmental WHE representative and established in this section and section 11.

d. Once the project is completed, the project WHE representative shall be returned to NAVFAC EXWC and the rigging gear added to the respective departmental/divisional inventory. Once added to the inventory, the project manager will determine if the gear will remain in the active inspection program or if the gear will be placed in layup until its use is required again. Project managers shall retain funds in their budget to support the labor required to meet the above requirement.

Section 16: CONTRACTOR CRANES: KOS/CORS/PROJECT MANAGERS RESPONSIBILITIES

1. Contractor Crane Definition

Contractor operated cranes; multi-purpose machines, material handling equipment (e.g., forklifts), construction equipment used as cranes to lift suspended loads, and rigging equipment in weight handling operations.

2. Discussion

In addition to cranes rented or leased for operation by an activity, other non-Navy owned cranes, multi-purpose machines, material handling equipment (e.g., forklifts), and construction equipment are that used on Navy property to lift suspended loads. Rigging equipment may be used with these machines or by itself in weight handling operations. These cranes and equipment can be from a variety of sources and are generally incidental to construction contracts, ship repair contracts, demolition contracts, maintenance and other service contracts, deliveries of supplies and equipment, etc. The following requirements apply to any contracted work utilizing cranes; multi-purpose machines, material handling equipment, construction equipment used to lift loads suspended by rigging gear; and to all rigging equipment used in weight handling operations at a naval activity, DoD activity, or NAVFAC EXWC project site. These requirements do not apply to shipboard cranes or rigging equipment. These requirements do not apply to cranes that enter the activity but are not used for lifting or other machines not used to lift loads suspended by rigging equipment.

3. KO Requirements

a. Reference (a) requires KOs to include the minimum requirements of 3.a.(2) through 3.a.(11) of this section in solicitations and resulting contract actions.

b. NAVFAC EXWC shall comply with the reference (a) KOs requirements below:

(1) CORs and project managers shall ensure performance work statements include the minimum requirements (as applicable) of 3.a.(2) through 3.a.(11) of this section when sent to the KO.

(2) The contractor shall comply with specific activity regulations pertaining to crane safety and operation (including allowable access routes and ground loading limitations) and shall notify the KO or COR in advance of any cranes entering the activity, or of any multi-purpose machines, material handling equipment, or construction equipment that may be used in a crane-like application to lift suspended loads. The contractor is required to comply with applicable American National Standard Institute (ANSI) or ASME standards (i.e., ASME B30.5 for mobile cranes, ASME B30.22 for articulating boom cranes, ASME B30.3 for construction tower cranes, and ASME B30.8 for floating cranes, ASME B30.9 for slings, ASME B30.20 for below the hook lifting devices, ASME B30.26 for rigging hardware, and ANSI/ITSDF B56.6 for rough terrain forklifts). Cranes, machines, and rigging equipment at a naval activity, DoD activity, NAVFAC EXWC project site, or in a foreign country shall comply with the appropriate host country safety standards. Barge-mounted mobile cranes require a third party certification from an Occupational Safety and Health Administration (OSHA) accredited organization (or a third party certification from a state accredited organization for those states with OSHA approved state plans), a load indicating device, a wind indicating device, and a marine type list and trim indicator readable in one-half degree increments. Third party certification is not required for barge-mounted mobile cranes at naval activities in foreign countries.

(3) The contractor shall supply a certificate of compliance; reference (a), Appendix P, Figure P-1 that the crane (or other machine if used to lift suspended loads) and the rigging equipment meet applicable OSHA and ANSI/ASME regulations citing the OSHA and ANSI/ASME regulations which are applicable (e.g., cranes/multipurpose machines used in cargo transfer will comply with 29 CFR 1917; cranes/multi-purpose machines used in construction, demolition, or maintenance shall comply with 29 CFR 1926; cranes/multi-purpose machines used in ship building, ship repair, or ship breaking shall comply with 29 CFR 1915; slings shall comply with ASME B30.9, and rigging hardware shall comply with ASME B30.26). For cranes (or other machines used to lift suspended loads) and rigging equipment at naval activities in foreign countries, the contractor shall certify that the

crane (or other machine) and the rigging equipment conform to the appropriate host country safety standards. The contractor shall also certify that all of its crane (or other machine) operators working on the naval activity have been trained not to bypass safety devices (e.g., anti-two block devices) during lifting operations. The certifications are required to be posted on the crane.

(4) For mobile and commercial truck mounted cranes with OEM rated capacities of greater than 2000 pounds, the crane operator is required to be qualified by a source that qualifies crane operators (i.e., a union, a government agency, or an organization that tests and qualifies crane operators). Proof of current qualification shall be provided. Operators of cranes used in construction at activities under U.S. jurisdiction follow the qualification and certification requirements of 29 CFR 1926.1427.

(a) The contractor is required to certify (in accordance with reference (a), Appendix P, Figure P-1) that the operator is qualified and trained for the operation of the crane or machine to be used.

(b) Proof or authorization from the machine OEM that the machine is capable of making lifts of loads suspended by rigging equipment is required for all multi-purpose machines, material handling equipment, and construction equipment used to lift loads suspended by rigging equipment. The contractor is required to demonstrate that the equipment is properly configured to make such lifts and is equipped with a load chart.

(5) All hooks used on cranes, hoists, other machines, and rigging gear are required to have self-closing latches or the throat opening will be "moused" (secured with wire, rope, heavy tape, etc.) or otherwise secured to prevent the attached item from coming free of the hook under a slack condition. The following exceptions apply and will be approved by the contractor’s technical organization; items where the hook throat is fully obstructed and not available for manual securing and lifts where securing the hook throat increases the danger to personnel such as forge shop, dip tank, or underwater work.

(6) A critical lift plan is required for each of the following lifts:

(a) Lifts over 75 percent of the capacity of the crane, hoist, or other machine (lifts over 50 percent of the capacity of a barge mounted mobile crane’s hoists) at any radius of lift

(b) Lifts involving more than one crane, hoist, or other machine

(c) Lifts of personnel (lifts of personnel suspended by rigging equipment from multi-purpose machines, material handling equipment, or construction equipment is not permitted)

(d) Lifts in the vicinity of overhead power lines

(e) Erection of cranes

(g) Lifts involving non-routine rigging, operation sensitive equipment, or unusual safety risks

(7) The plan will include the following as applicable:

(a) The size and weight of the load to be lifted, including crane (or other machine) and rigging equipment that add to the weight (The OEM's maximum load capacities for the entire range of the lift shall also be provided.)

(b) The lift geometry, including the crane (or other machine) position, boom length and angle, height of lift, and radius for the entire range of the lift (This is applicable to both single and multiple crane/machine lifts.)

(c) A rigging plan; showing the lift points, rigging equipment, and rigging procedures

(d) The environmental conditions under which lift operations are to be stopped

(e) For lifts of personnel, the plan shall demonstrate compliance with the requirements of 29 CFR 1926.1431

(f) For barge mounted mobile cranes, barge stability calculations identifying crane placement/footprint; barge list and trim based on anticipated loading; and load charts based on calculated list and trim specific to the barge the crane is

mounted on (The amount of list and trim shall be within the crane manufacturer's requirements.)

(g) For lifts in the vicinity of overhead power lines (i.e.; if any part of the crane or other machine; including the fully extended boom of a telescoping boom crane or machine; or the load could approach the distances noted in reference (a), Figure 10-3 during a proposed operation), the plan shall demonstrate compliance to 29 CFR 1926.1408-1411

(8) The contractor is required to notify the KO or COR as soon as practical, but no later than four hours after any WHE accident. The contractor is required to secure the accident site and protect evidence until released by the KO. The contractor is required to conduct an accident investigation to establish the root cause(s) of any WHE accident. Crane operations shall not proceed until cause is determined and corrective actions have been implemented to the satisfaction of the KO.

(9) The contractor is required to provide the KO, within 10 days of any accident, a Crane and Rigging Gear Accident Report using the form provided in section 6 consisting of a summary of circumstances, an explanation of causes(s), photographs, and corrective actions taken.

(10) The contractor is required to certify in the return proposal that signal persons used in construction work are qualified in accordance with 29 CFR 1926.1428.

(11) Contractor provided tower cranes used in construction must meet the additional requirements of CFR 1926.1435. The following additional documentation is required for contractor provided tower cranes (those cranes defined by ASME B30.3):

(a) Foundation design and requirements

(b) Installation instructions

(c) Assembly/disassembly instructions including climbing/jumping instructions if applicable

(d) Operating manual, limitations, and precautions

(e) Periodic inspection and maintenance requirements

4. Crane and Rigging Operations Oversight

Reference (a) requires that KOs and CORs ensure compliance with contract requirements, provide oversight of contractor crane and rigging operations, and provide oversight of accident investigations and corrective actions. The degree of oversight shall be based upon the risk to government personnel and property. Reference (a), Appendix P, Figure P-2 provides a checklist that shall be used as a minimum during oversight of all contractor crane and rigging operations.

a. NAVFAC EXWC CORS shall utilize the NAVFAC BMS F-19.7 NAVFAC EXWC-FEC Support Agreement: https://portal.navfac.navy.mil/portal/page/portal/centers/navfacexwc/op/op5/tab1 to request PW to provide the crane oversight (surveillance) required by 4 above. The agreement will include that PW verify that reference (a), Appendix P, Figure P-1 form is completed by the contractor and that PW will complete the reference (a), Appendix P, Figure P-2 form and provide a copy of the completed form to the COR or their DR that requested the service. CORs shall retain copies of the completed P-2 form in the contract file for one year.

(1) For contracted cranes on other than Navy property, the local host activity safety office shall be contacted for specific host activity crane oversight requirements. Additionally, CORs or their DR shall verify that the reference (a), Appendix P, Figure P-1 form is completed by the contractor and complete the reference (a), Appendix P, Figure P-2 form for contracted crane services conducted on other than Navy property. NAVFAC EXWC personnel completing the oversight (P-2 form) shall complete the NCC “Contractor Crane Awareness” training prior to providing the oversight.

(2) Upon completion of the oversight (mentioned in paragraph 4.a), CORs shall submit a copy of the completed contractor crane surveillance report (reference (a), Appendix P, Figure P-2) to the WHE Program Manager for evaluation.

b. NAVFAC EXWC CORs or their DR shall provide oversight of contractor accident investigations and corrective actions. Upon notification by the contractor of any WHE accident, CORs or the

DR shall immediately notify the CO. The CO shall task the Operations Officer (OPS) to inform the host activity. The CO shall task the Safety Manager to follow section 6 requirements for accident investigation and reporting.

(1) CORs and KOs shall review all contractor submitted WHE accident reports regardless of severity and the KO shall forward the accident report to OPS, Safety Manager, and the WHE Program Manager upon receipt, but not later than 15 days following the accident. OPS shall provide a copy to the host activity. CORs or the DR shall use the guidance from section 6 of this instruction for accident investigation and reporting.

(2) When the contracting office is not in the local area, CORs or the KO shall designate a local representative to ensure compliance with the above noted requirements.

c. OPS has approved the use of official correspondence (e-mail) in lieu of the BMS F-19.7 NAVFAC EXWC-FEC Support Agreement for requesting base PW to provide contractor crane oversight onboard NBVC. This process has been coordinated with base PW recognizing that NAVFAC EXWC is a tenant on the base and we frequently need contractor crane oversight for work on our compound and at the waterfront. This only applies to NBVC. BMS F-19.7 with its associated support agreement is required elsewhere.

(1) The correspondence approach for requesting support can only be effective if a positive acknowledgement is received back from the base PW crane shop. The response from base PW documenting their acceptance and agreement to provide the oversight shall be maintained in the project record. The email shall be uploaded to the eProject record.

(2) For the rare occasions when e-mail is not possible due to urgent work, requests for oversight can be made via phone. The name of the PW crane shop employee which agreed to provide oversight shall be documented in the project record (status note). Requests via phone should be the exception, not the rule.

(3) This process is posted on the NAVFAC EXWC Operations portal page at: https://portal.navfac.navy.mil/portal/page/portal/centers/navfacexwc/op/op5/tab1.

5. Other Responsibilities

a. NAVFAC EXWC personnel shall not signal contractor cranes, except when having the written approval from their respective department head to do so.

b. Contractor personnel operating, maintaining, inspecting, or testing Navy WHE will qualify per reference (a). DoD contractors shall provide to the KO documentation that the aforementioned training, qualification, and licensing (as required) requirements are met.

c. NAVFAC EXWC CORs and their DRs shall ensure that contract requirements related to WHE work are enforced (including work performed by sub-contractors) and that adequate oversight is provided during contractor WHE operations including contractor accident prevention, accident investigations, and corrective actions.